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A
TREATISE
ON THE
MANAGEMENT
OF
FEMALE COMPLAINTS.

By ALEXANDER HAMILTON, M. D.

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OF THE ROYAL COLLEGE OF PHYSICIANS, AND OF THE
ROYAL SOCIETY OF EDINBURGH, &c.

NINTH EDITION.

REVISED AND ENLARGED ;



WITH HINTS FOR THE TREATMENT OF THE PRINCIPAL
DISEASES OF INFANTS AND CHILDREN,

By DR JAMES HAMILTON *JUNIOR*,

PROFESSOR OF MIDWIFERY IN THE UNIVERSITY OF EDINBURGH, &c.

EDINBURGH:

PRINTED FOR BELL & BRADFUTE, EDINBURGH;

LONGMAN & CO., G. & W. B. WHITTAKER, AND

OGLE, DUNCAN & CO., LONDON;

AND HODGES & MACARTHUR, DUBLIN.

1824.



P. NEILL, Printer.

ADVERTISEMENT.

THE Author of the following pages was induced, in the year 1780, to publish, for the use of Midwives, a Treatise on the Management of Female Complaints, divested of technical terms.—As he found that the work had been pretty extensively circulated among private families, he thought it incumbent on him to alter considerably the subsequent editions.

He endeavoured to give such a description of the most ordinary complaints to which women are liable, as should be intelligible to the attendants, or to the patients themselves; to point out the circumstances from whence the several disorders originate, for the purpose of guarding against their occurrence; to distinguish those cases which yield readily to the employment of simple means, from those which require complicated management, and, of course, the regular attendance of a medical practitioner; and to detail the means for

checking or retarding the progress of such cases. He added a few directions for the management of Children during early infancy.

After the decease of the Author in the year 1802, the charge of superintending the subsequent editions of the Work devolved upon his Son ; and his anxious endeavour has always been to fulfil, according to the best of his abilities, the favourite wish of his respected Father, that every successive impression of the Book might be rendered better calculated for general use.

With these views, he added the hints for the Treatment of the Principal Diseases of INFANCY and CHILDHOOD, in the year 1809 ; and he has now, in this Ninth Edition, made several alterations and some additions, which observation and experience, acquired in the course of a pretty extensive practice, have suggested to him. He trusts, that, in the following pages, the reader will find no delusive speculations ; and he fearlessly avers, that there are no *false* nor distorted statements of facts.

EDINBURGH, }
January 1. 1824. }

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MANAGEMENT OF INFANTS AND
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MANAGEMENT OF FEMALE COMPLAINTS.

CHAPTER I.

DISEASES WHICH OCCUR IN THE UNIMPREG- NATED STATE.

THE delicacy of feeling which characterizes the female sex in refined society, naturally leads them to conceal, as long as possible, every complaint in parts of the body which they have been accustomed to avoid naming.—But the peculiar structure of women, and the habits of civilization, render them liable to many diseases in the unimpregnated state, which, from neglect, are apt to become painful or dangerous. It must, therefore, be useful to rouse their attention to disorders of the parts alluded to, that they may be warned against that delay in the adoption of the appropriate means which has in many instances proved so fatal.

Where the preservation of health is the object in view, a detail of the signs or marks of disease, whatever may be the part of the body referred to, ought not to be considered indelicate. The experience of the Editor of this work having taught him that many individuals have had their health irreparably injured, from not being at all aware of the nature of their sufferings, he has been induced, in the present edition, to enter into some details which he formerly deemed unnecessary.

SECTION I.

Inflammation and Itching.

INFLAMMATION of the external parts is known by the pain, and the sense of increased heat, with swelling, which always accompany it.

Many circumstances occasion inflammation of those parts; such as exposure to cold, excessive exercise, &c.—As mortification, with all its hazardous consequences, is exceedingly apt to take place, the means for checking the progress of this disorder are to be pursued without a moment's delay.

At first, in every case, abstinence from animal food and fermented liquors, strict quiet in every respect, and a dose of some cooling laxative medicine, will be found useful. If there be any feverish feelings, blood should be drawn from the arm; and, if

the local pain and swelling be considerable, leeches are to be applied to the inflamed part, and the bleeding from their bites is to be encouraged for some hours.—Warm fomentations, such as an infusion of poppy heads, or chamomile flowers, or warm water with brandy, in the proportion of three to one, repeated every six hours, or an emollient poultice of bread and milk, renewed five or six times within the twenty-four hours, are also to be had recourse to.

Cold styptic applications, such as a solution of sugar of lead, are generally most injurious, and are on no account whatever to be employed, unless specially directed by a practitioner.

When mortification threatens, known by the livid or blackish colour of the affected parts, and a discharge of matter with an abominable smell, hot turpentine dressings are to be applied externally, while the vigour of the general system is to be supported or excited by wine, bark, and other stimulants. In such cases, it is obvious, that medical attendance is absolutely indispensable.

There is a kind of chronic inflammation of the passage to the womb, which occurs chiefly, though not exclusively, in women rather advanced in life. It may be suspected, if there be heat and irritation about those parts, with frequent desire to make water, and a colourless discharge from the affected passage.

Vegetable diet, with the daily use of the warm

bath, and a six or eight weeks course of any of the cooling neutral salts, furnish the simplest means of relieving this affection. But in some cases the disease proves most obstinate, and requires a variety of treatment, according to circumstances, of which an experienced practitioner can alone judge.

ITCHING sometimes occurs in a most distressing degree, especially in women towards the decline of life—and is occasioned by a number of different causes.

When accompanied with irritation of the lower part of the gut, it usually arises from small thready worms lodged there, and may be relieved by the suitable means for expelling the worms.

In persons of a full habit, itching is sometimes the consequence of an eruption on the skin of the parts affected, and is readily distinguished by its appearance, which is that of new-polished copper. The repeated application of leeches, low diet, and occasional doses of cooling laxatives, are necessary in this particular complaint.

When no obvious cause of itching can be discovered, and when the complaint does not yield to the repeated use of the warm bath, mild diet, and one or more doses of neutral salts, it will be found to depend, either upon some peculiar condition of the very minute nerves of the skin, or on some disease of the womb, or its appendages; and, in either case, it requires the most serious attention, otherwise it may become tedious or incurable.

SECTION II.

External Swellings.

WHEN EXTERNAL Swelling is unaccompanied with inflammation, it proceeds either from what are called ruptures—or dropsy of the skin—or the effusion of blood—or the protrusion of the vagina.

Swelling from Rupture is confined to one side, and it can either be reduced by pressure, while in the horizontal posture, or can be enlarged or reproduced by coughing or sneezing—or, if incompressible, and occurring suddenly, it is accompanied with pain, sickness, and fever.

It seldom happens that ruptures in a violent degree take place suddenly, as there is generally a sense of fulness in the part on taking exercise, (which subsides on lying down), for weeks or months, or even longer, before the disease be decidedly marked. By proper attention to such symptoms, the risk of a complete rupture may certainly be avoided: but where this accident has actually happened, no time must be lost in procuring surgical aid.

Swelling from a dropsical state of the skin may be readily recognised, for it is unaccompanied with a sense of heat or pain; it extends equally to both sides; and it is evidently semitransparent.

Though not, strictly speaking, a painful com-

plaint, swelling from this cause is extremely inconvenient and distressing, whenever it attains a certain size. This has led to the practice of puncturing the parts; but much injury has followed in many instances, and therefore, in general, palliative means are alone warrantable, attention being at the same time paid to the disease of the habit of which this swelling is the effect.

When the swelling is occasioned by an effusion of blood into the skin from the rupture of a blood-vessel, it comes on suddenly, is confined to one side, is accompanied with great pain, and has a hard knotty feel.—Emollient poultices, opiates, and low diet, are commonly sufficient for this complaint.

The Vagina, or passage to the womb, is sometimes protruded, or pushed out of its natural situation. The disease appears in the form of a soft compressible tumor or swelling, protruding without the external passage, in some cases extending backwards, and in other cases situated on one side. It is not painful when pressed upon, and most commonly it subsides when the patient lies down, being only troublesome when she is in the erect posture. It can be readily distinguished by the practitioner, but may be mistaken by the patient.

The disease is owing to local relaxation, and that is frequently the consequence of mismanagement after lying-in, though, as it occasionally occurs in

virgins, it must also arise from chronic weakness, and perhaps from violent exertions during the menstrual periods.

The cure depends on the protruded part being replaced, and the weakened state of the vagina remedied. These purposes may be accomplished by the means recommended in cases of descent of the womb. When the disease is the consequence of general weakness of the habit, the Peruvian bark, and mineral waters, with steel, should be taken internally, and a suitable plan of diet and exercise ought to be followed.

SECTION III.

Diseases of the Urinary Organs.

VIOLENT fixed pain in the region of the loins, towards either side of the back-bone, accompanied with sickness or vomiting, is well known to indicate an affection of the kidney. This may consist either of inflammation of its substance, or irritation produced by the presence of a calculus within its cavity; and it requires, in many cases, much practical discernment to distinguish those two different affections.

The treatment must be varied according to the nature of the complaint. Bloodletting, where there are feverish symptoms, should invariably be

premised. The warm-bath and opiates tend to alleviate the pain.—And experience has shown, that where calculous concretions are apt to be formed in the kidneys, calcined magnesia and certain alkaline medicines, lessen the tendency. But in some cases, those medicines tend to aggravate the disease, and diluted mineral acids furnish the proper remedies. No patient, therefore, ought to enter on a course of magnesia or soda, or any similar drug, without the advice of a medical practitioner.

STONE in the bladder is a very uncommon complaint in women, because the particles of sand which lay the foundation for large concretions, are very readily thrown off with the urine. But when great pain is felt in the bladder after making water, or on using exercise, there is reason to apprehend the presence of a stone, and immediate recourse should be had to the proper means for ascertaining the fact.

Sometimes stony concretions have been found impacted in the passage (called Urethra) by which the urine is expelled from the bladder. This is known by there being fixed pain in the part, and inability to void urine, and may be remedied by a simple surgical operation. But when pain attends the efforts to pass water, and occurs at no other time, it may be suspected to proceed from the growth of a small excrescence in the passage, which is of so spongy a texture that it may be readily destroyed, without any formidable or painful operation.

Inability to retain the urine, unattended with pain, is sometimes the effect of fever, and proves a temporary affection, which requires no other care than attention to cleanliness.

The same complaint is apt to occur in young women previous to the establishment of the periodical discharge. It happens only during sleep, and if neglected may become habitual. Attention to the regulation of the diet, and of the state of the bowels, a course of the medicine called UVA URSI, and the occasional use of preparations of camphor, with a small proportion of opium, are the chief remedies for this complaint.

When the urine appears ropy, as if mixed with slime, and emits a disagreeable smell, a diseased state of the internal surface of the bladder may be suspected. If the use of a milk and vegetable diet, with occasional doses of neutral salts as laxatives, do not, in a short time, change this condition of the urine, the state of the bladder should be carefully examined, and a course of alteratives adapted to the nature of the case should be advised.

Bloody urine is sometimes rather an alarming than a really serious disease, but it always requires early and careful attention.

Incapability of voiding the urine is a very common occurrence, and fortunately admits of speedy

relief, without pain to the patient, by the introduction of a small flat silver pipe called a Catheter, if the more simple means of fomenting with warm water, &c. fail.

In old age the bladder sometimes becomes hardened and thickened, and eventually cancerous. This may be dreaded if there be frequent desire to pass water, accompanied with almost constant pain, while only very small quantities of urine of a fetid smell are passed at the time. It may be ascertained by examination; and, although it cannot be cured, the painful symptoms may be alleviated.

SECTION IV.

Bearing down and Descent of the Womb.

THIS is a very common complaint, and takes place in women of every age and of every rank. As its name implies, it consists of a change in the situation of the womb, by which that part falls much lower than it ought to do. In some cases, it absolutely protrudes entirely without the passages. The slighter degrees are styled Bearing down, and the more violent ones Descent or falling down, of the womb.

In general, the first symptom of this disease is an uneasy sensation in the lower part of the back

while standing or walking, with now and then a kind of pressure or bearing down. If these feelings be disregarded, the complaint increases, and the patient becomes incapable of making water without first lying down, or pushing up a swelling which seems to stop the discharge of urine; and, in the increased degrees, the womb is actually forced out of the parts, and takes on the form of a bulky substance hanging between the thighs. This latter occurrence can seldom happen, excepting in women who have had a great many children; but the lesser degrees of falling down occur occasionally in very young unmarried women.

Displacement of the womb, though a local disease, is often productive of a number of distressing symptoms, which undermine the constitution. These principally arise from disturbed functions of the stomach and bowels, and impaired condition of the nervous system, and are so variously modified and combined in different individuals, that it would be a difficult task to give even a general description of them.

It is quite impossible for the patient herself to distinguish this complaint from others which it resembles in many of the uneasy feelings; but no practitioner, in the habit of attending to the subject, can be mistaken, if he examine the seat of the disease. Were he to trust to the description of the inconvenience and distress experienced by the patient herself, he would often be deceived.

The causes of descent of the womb ought to be known to every woman, as many of them may be avoided.—Every disease which induces weakness of the habit in general, or of the passage leading to the womb in particular, must lay the foundation for it. Frequent miscarriage, improper treatment during labour, too early violent exercise after delivery, are, in married women, the most frequent circumstances by which falling down of the womb is produced. In the unmarried, it is apt to take place in consequence of violent exercise, as dancing, riding, &c. while out of order; a fact that ought to be impressed on the mind of every young woman.

In the treatment of this disease, the means must be adapted to the degree of its violence. When the descent is inconsiderable, and the case is of recent date, the daily use of the cold bath, invigorating diet, very moderate exercise, and the injection of any mild astringent liquor into the passage, evening and morning, will probably prove successful. But should the disease be in a greater degree, or of long standing, a course of tonics, with the frequent use of some strong astringent wash (see Appendix), must be added to the above means.

When the complaint resists such remedies, or when, from its degree, it shall appear unnecessary to employ them, the only relief which can be afforded, unless the woman become pregnant, is to be obtained by wearing an instrument called a Pessary. It is made of wood or of ivory, and if properly adapted

to the passage, and of a proper construction, it can be worn without much inconvenience, and it never occasions pain. Certain attentions, however, are necessary, wherever such an instrument is used. Thus, the pessary should never be allowed to remain in the passage above a few days at a time, otherwise it becomes the source of great irritation. It should therefore be occasionally withdrawn on going to bed, well cleaned, and reintroduced in the morning, before the patient rises. In some instances, after a pessary of a certain size has been worn for several months, one of a smaller size becomes better adapted to the passages, and in other cases one of a larger size is required.

If a woman, liable to falling down of the womb, become pregnant, there is no occasion for the pessary after the third month; and, by a particular treatment after delivery, the return of the complaint may, in general, be prevented.

SECTION V.

Tumors in the Vagina and Womb.

THE Vagina and Womb are subject, in common with some other parts of the body, to fleshy excrescences called Polypous tumors. These, in many cases, are soft as clotted blood; in others, they resemble flesh; and sometimes they are found of a

hard consistence. They are of different sizes and shapes.

Little inconvenience is felt from such excrescences when they are small, except from their occasioning irregular discharges of blood from the womb or vagina. But the most troublesome, as well as dangerous, symptoms, occur in the progress of the disease when the tumor becomes bulky.

Violent bearing down pain, frequent discharges of blood, and the constant draining of a fetid, ill-coloured fluid from the vagina, along with difficulty in passing water, or more or less inability to discharge it, and irritation on the straight gut, inducing continual desire to go to stool, are the symptoms of a large excrescence in the womb or vagina. When the disease has continued for some time, the tumor hangs at last without the passage of the womb.

If this disease be long neglected, the pains increase in violence, and the patient becomes emaciated from the continual discharges.

These excrescences have often been mistaken for descent of the uterus, and sometimes even for the head of a child. A surgeon in Lyons actually tore away, by the utmost exertion of force, the womb, along with an excrescence, having imagined that the patient was in labour, and that he pulled by a part of the child.

In the treatment of excrescences of the womb, &c. it is of very great importance to form an accu-

rate idea of the disease. The symptoms, therefore, which distinguish it from other complaints, ought to be well known.

Such excrescences differ from descent of the womb in being attended with frequent discharges of blood, and, when felt, in being broad and bulky, and having no orifice, like the protruded womb, and in being easily moved, or twirled round, as it were, by the finger.

The cause which favours the growth of these excrescences has not been ascertained. It is evidently unconnected with the married state, as the disease occurs in unmarried women, and it does not appear to attack exclusively any particular constitution.

If polypous excrescences be early attended to, they may, in many instances, be removed without danger, or occasioning much pain. But when they have acquired a great size, the danger is proportionally increased.

The cure depends on a surgical operation, which requires a very accurate knowledge of the structure and situation of the contiguous parts, otherwise the most fatal errors may be committed. When performed properly it occasions neither pain nor danger. In cases where, from neglect, the patient is very much reduced in strength, before the true nature of the disease has been ascertained, the operation ought to be performed without delay, as no internal remedies can be of any avail while the tumor remains.

SECTION VI.

Cancerous Affections of the Womb.

ULCERATED Cancer of the womb is, perhaps, the most dreadful disease to which the human body is subject.

It commonly begins at the decline of life, though cases from time to time occur, where it attacks young women ; and its approach is in general gradual.—At first the patient feels an uneasy weight in the lower part of the belly, with the sensation of heat or disagreeable itching. By degrees irregular shooting pains, darting across from the share-bones, take place. The pain at last becomes fixed in the womb, and is stated by the patient herself to occasion a constant gnawing, burning sensation. A discharge of ill-coloured, fetid, acrid matter from the vagina attends this pain ; and notwithstanding every attention to cleanliness, excoriates the neighbouring parts.—If the patient have the misfortune to linger long in this situation, her condition becomes shocking in the highest degree, both to herself and to those about her. Under such circumstances, death loses its formidable appearance, and is anxiously wished for both by the unhappy sufferer herself and by all her friends.

Such symptoms require the most serious attention ; for if they arise from incipient cancer, the life

of the patient must depend on their proper treatment; and therefore recourse should be had, on their first appearance, to the advice of a practitioner; more especially, as the same feelings are sometimes occasioned by other diseases which may be removed by proper assistance.

The nature of cancer is not yet properly understood by practitioners; but it is well known, that the first change in the part which afterwards becomes cancerous, is a thickening and hardening of its substance. This may be suspected to have taken place in the womb, if there be pains in the thighs and back, bearing down when using exercise, and occasional violent discharge of clotted blood. But the same complaints arise from polypous excrescences; and it is only by a careful examination that the two diseases can be distinguished. This is a matter of such importance, that life may be said to depend on early attention to the above complaints,—for whether they be occasioned by the one or other cause, if they be neglected for weeks or months, they become incurable.

In the early stages of cancer of the womb, a continued perseverance in a milk and vegetable diet, a total abstinence from animal food of every kind, and from all fermented liquors, occasional bloodletting, and in some cases the establishment of one or two issues in the arms or above the knees, together with frequent doses of cooling laxative salts, and a course of warm bathing, tend most ma-

terially to relieve the symptoms, and to retard the progress of the disease.—Preparations of mercury so frequently prescribed for such complaints, never fail to aggravate the sufferings, and to hurry on the fatal event,—a fact which ought to be known by every woman, that she may resist the prejudiced advice of those practitioners who invariably have recourse to that active mineral, whenever ordinary means fail.

Cancerous complaints, in their advanced stage, produce the most deplorable effects; and, therefore, it is not wonderful that women subjected to them should, with eagerness, have recourse to every impudent quack who pretends to have discovered a nostrum for their cure. The Author of these pages, however, deems it his duty to caution women against listening to the pretensions of empirics. It is well known, that hitherto no medicine capable of removing cancer by its operation on the general habit, has been discovered, notwithstanding the anxious endeavours of practitioners of every variety of talent, and in every part of the world.

At present, quacks found their pretensions on the successful event of individual cases; and the eagerness and credulity of patients too often lead them to suppose a resemblance between their own complaints and those of others of whom they have heard. The Editor of this work has had many opportunities of remarking, that even persons of

the most cultivated minds cannot resist this self-delusion. Yet common sense should dictate, that were any single case of cancer cured by internal medicines, every cancerous complaint, wherever situated, should yield to the same means; just as (what is well known) the particular disease for which mercury is a certain remedy, although it appears in a variety of forms, and in different parts of the body, is uniformly removed by the same mineral.

Many shocking cases have occurred within the observation of the Author of this work, where patients have neglected pursuing with steadiness the suggestions of regular practitioners, in consequence of the false confidence they were induced to place in the dishonest promises of the discoverers of nostrums. A simple recital of the agony of such individuals previous to death, might appear incredible. The interference of the Legislature in checking this species of robbery is certainly required, since not only is money stolen, but also is life destroyed, and that in a way of torture, too, which the severity of law has never yet exercised on the most flagitious criminals.

SECTION VII.

Anomalous Affections of the Vagina and Womb.

THE involuntary discharge of wind from the vagina is, in some cases, the effect of a communi-

cation between that passage and the gut, and in other cases arises from relaxation of all those parts. The cure must be adapted to the cause.

A watery discharge sometimes takes place from the vagina, and is the effect of some irregular action of the glands of the neck of the womb. It is not at all a dangerous affection, and yields pretty readily to proper remedies. These consist of tonic medicines, after the bowels have been well cleared out by two or more doses of smart purgatives.

Calculous concretions have sometimes been found in the vagina, and have occasioned a number of alarming complaints. They may be easily distinguished and removed by a practitioner.

Certain folds of the vagina, next its orifice, are apt to become thickened and hard, as if horny. As this state may eventually degenerate into cancer, it is necessary to apply for surgical assistance whenever it is discovered.

The womb, in some cases, suddenly swells to the size of a large orange, inducing considerable pain and irritation. In general, this is not accompanied with the feverish symptoms which commonly attend the inflammation of other internal parts; but the duration of the complaint, where unattended to at the beginning, is often extended to many

months; and in some neglected cases, which have fallen within the Author's notice, the womb has never been restored to its natural healthy condition.

As this disease may be readily arrested in its progress, it is a matter of considerable importance to mark its first attack. A sense of fulness in the lower part of the belly, pain in the back, pressure and uneasiness on standing and while using exercise, occasionally increased on making water, and aggravated, too, after having had relief from the bowels, with feverishness, and general indisposition, are pretty certain marks of this condition of the womb. But as some of these feelings occur in other affections of the same part, perhaps the safe rule is, to have the nature of the case ascertained, whenever any of those symptoms are perceived.

This swelling of the womb is occasioned by various causes. In some cases, exposure to cold has certainly had this effect; in others it has arisen from the sudden stoppage of the whites by the use of styptic injections, or of the periodical discharge by means of cold water and vinegar applied to the lower part of the belly; and, in other cases, it has been produced by mismanagement after delivery or abortion.

Bloodletting, both by means of the lancet and of leeches, or cupping, diaphoretics, and such laxatives as promote absorption, and the use of the warm bath, with such other remedies as may be re-

quired to relieve particular symptoms, if employed actively at the commencement of this disease, seldom fail of removing it. But where the case has been neglected or misunderstood at the beginning, the cure is always tedious, and often imperfect. Under such circumstances, the means best calculated to increase the action of the absorbents in the individual patient are to be had recourse to. Consequently the warm sea-bath, a course of Harrowgate or Cheltenham water, or of some combinations of mercury, with other alteratives, or of foxglove, are occasionally necessary.

A thin ill-coloured watery discharge from the vagina, attended with sense of weariness in the back, inability to use exercise, prostration of strength, with loss of appetite, and indisposition of the general frame, indicate a diseased condition of the womb, which has been little attended to by practitioners. When its progress is uninterrupted, it terminates in dropsy and hectic fever.

This disease commonly does not occur till after the decline of life, and has been known to attack women of every different constitution. The cause, whatever that may be, has the effect of totally altering the structure of the womb, so that its substance becomes thickened and spongy, while it is so flabby, that the slightest pressure upon it makes a watery fluid exude.

A course of alterative medicines, at the commencement of this complaint, may check its progress ; but hitherto all means have failed to cure it, after the altered structure has really taken place.

Small circumscribed hardened tumors of various descriptions have been found imbedded in the substance of the womb, in some cases without injuring health, and in others productive of much distress. The existence of these can be ascertained only by accurate examination, and the treatment must be varied by circumstances.

Malignant excrescences about the mouth of the womb, and also within its cavity, now and then are met with, and occasion many of the symptoms of cancer. They can only be distinguished by a practitioner, and they require the most immediate and serious attention.

SECTION VIII.

Dropsy of the Appendages of the Womb.

THE womb itself has been imagined to form the seat of collections of a watery fluid, like other cavities of the body. This, however, can never probably happen, except where the fluid is contained

within white-coloured vesicles of various sizes, resembling green grapes when too ripe, called *Hydatids*. The nature of these bodies is not yet fully understood.

It was formerly supposed that these had been originally blighted conceptions ; and there can be no doubt that they are, in some cases, the consequence of a diseased state of the after-birth, or of the membranes which envelope the infant. But as many cases have occurred where those substances had certainly been formed in the womb long after the period of child-bearing life, there can be as little doubt that they may exist independent of impregnation. In the former editions of this work, a case was recorded where a lady, who had a polypous excrescence extracted from the womb some time after the decline of life, (when, at least, in the fiftieth year of her age), expelled ten years afterwards, with great pain and considerable hemorrhagy, a mass weighing above two pounds, consisting of a quantity of *Hydatids*, adhering to a spongy membranous substance.

There are no marks by which the existence of those substances can be discovered, till the effort of nature to throw them off takes place. When this happens, means, varied according to circumstances, must be had recourse to ; but there is so much danger attending this effort, that suitable assistance ought to be procured whenever it threatens.

The appendages of the womb, called Ovaries, are very frequently the seat of dropsy. This disease occurs at every different period of life.

It is a most extraordinary fact, that a small body, not larger than a nutmeg, and having naturally no cavity, should by disease become so enlarged as to contain, in many instances, above ten gallons of watery fluid.

The enlargement of the ovary is at first very inconsiderable. The bulk generally increases gradually, and when noticed appears to be confined to one side, more frequently the left one. The patient enjoys usual good health in most cases till the tumor have acquired a considerable size; it then induces pain and numbness in the thigh corresponding with the side in which the swelling is situated, and by degrees the body becomes wasted, the appetite bad, and the strength impaired.

When the swelling has increased so much as to enlarge the whole belly, breathlessness, and cramps of the thighs and legs, are produced, which at last terminate the woman's life.

The progress of this disease, however, is not equally rapid in all cases. Some women have had dropsical ovary upwards of thirty years, without feeling much inconvenience from it. Others have had very rapidly the dangerous symptoms after the first evidence of the disease.

Dropsy of the ovary ought to be carefully distinguished from general dropsy, and from pregnancy :

if it be mistaken for the former, the patient may be teased with medicines, which will rather aggravate than relieve the disease ; and if the latter be mistaken for this complaint, the most fatal consequences must follow. Many women have lost their lives by such errors.

The discrimination of the disease is, in many cases, a task of such difficulty, that the most experienced in the profession have been occasionally puzzled. Fortunately, however, it may generally be distinguished from pregnancy ; and as, in some instances, those labouring under dropsy of the ovary have born children, it is an indispensable rule in practice, never to prescribe for that disease, till the exact condition of the womb itself be unequivocally ascertained.

Nothing can be more uncertain than the progress or termination of this complaint. Experience has proved, that, under the most apparently desperate circumstances, the health has been in a measure restored, or life has for a considerable time been protracted ; while, on the other hand, where no urgent symptoms have appeared, a sudden aggravation of complaints has occurred, and a rapid advance to the fatal termination has taken place.

With respect to the causes of this disease, nothing satisfactory can be offered. Women of every age and condition are found afflicted with it. Human prudence, there is reason to fear, can neither foresee nor prevent its occurrence.

Till within these very few years, this disease was supposed to be beyond the reach of medical aid ;— but it is now ascertained, that, in many instances, it may be completely removed by means of percussion properly applied, the internal use of the muriate of lime or similar remedies, and the warm sea-water bath. In cases which thus admit of a cure, the fluid is probably contained within a single sac or cavity ; but it frequently happens that there is a collection of what are called Hydatids in the ovarium, and the above means have no influence in removing this cause.

When, from neglect, dropsy of the ovary has made such progress that there is no chance of a cure, or where, from the inequality of the surface, and other circumstances, there is reason to attribute the enlargement to a collection of Hydatids, the great object ought to be to retard the progress of the disease. For this purpose, every means which can promote general health, and an increased action of the kidneys, ought to be employed.

Diuretic medicines, and gentle laxatives, should therefore be taken from time to time. Nitre, cream of tartar, and an infusion of juniper-berries, or of broom-seed, seem to be the safest diuretics ; and any of the laxative cooling salts may be used to keep the belly gently open. While this plan is pursued, the belly should be firmly compressed by a flannel roller, or proper bandage.

When the symptoms of breathlessness and very

great debility become urgent, the water may be taken off by the operation of tapping. A temporary relief only, however, can in general be obtained by this means, for the fluid is commonly soon again accumulated in increased quantity. But in some cases, especially where the general health of the patient had remained unimpaired, the disease has been prevented from returning after tapping.

SECTION IX.

Irregularities of the Periodical Evacuation.

IT is commonly believed that those women enjoy the best health who have the periodical discharge most regularly; and, on the contrary, that those who have bad health, either want it altogether, or have it sparingly, irregularly, or excessively. Hence it has been supposed to be so essential to the female constitution, that irregularities of that evacuation prove the source of most of the diseases incident to the sex. But in general these are more frequently the *effects* of something faulty in the habit, than the *cause* of the bad health which at that time occurs.

It may be necessary to premise to the account of the irregularities, a slight sketch of the nature of the periodical discharge.

This interesting event does not happen till the growth of the body be well advanced, and, consequently, in this country, young women seldom menstruate before the fourteenth year, and many not sooner than the seventeenth or eighteenth, though there are sometimes deviations from this ordinary law. Previous to the establishment of the discharge, there are commonly many uneasy feelings, and a certain succession of changes in the state of health, and in the general appearance of the individual, which have been vulgarly called Green-sickness, from the colour of the countenance. These complaints have often been mistaken for worms, for pulmonary consumption, for dropsy, and for other diseases; and it is not easy to point out the means by which they may be distinguished from such disorders, as it often requires the utmost discrimination on the part of the practitioner, to determine the precise nature of the complaints of young women at that age. Uterine irritation is one of the chief marks; but it would be improper, in a work of this kind, to enter into a full explanation on this subject.

After the discharge has become established, it recurs periodically while in health, and, while neither pregnant nor giving suck, for above thirty years in this climate; and its recurrence in most healthy women is so regular, at a certain interval, that it can be calculated with great exactness. It continues for a certain number of days, different in

different individuals, and its approach is generally preceded by certain feelings of oppression or deviation from the ordinary state of health, which warn the individual of what is to happen. There is, in particular, a sensation of fulness about the lower part of the belly, and of relaxation about the uterine system, which can scarcely be overlooked by the most heedless. It must at the same time be admitted, that in some few constitutions those feelings are so inconsiderable as to be little attended to, so that the woman mixes in society as usual, without any apparent inconvenience.

Women in the higher ranks of life, and those of a delicate nervous constitution, are subject to sickness, headache, and pains in the back and loins, during the periodical evacuation. Those of the lower rank, inured to exercise and labour, and strangers to those refinements which debilitate the system, and interrupt the functions essential to the preservation of health, are seldom observed to suffer at these times, unless from general indisposition, or a diseased state of the womb.

Towards the decline of life, considerable irregularities take place previous to the final cessation of the discharge, and many months commonly elapse before this important change be fully accomplished.

With respect to the nature of the periodical evacuation, very little satisfactory can be said. It is not the discharge of a noxious matter generated in the system of women, as has been superstitiously

imagined. Its influence cannot extend beyond the person of the individual in whom it is going on ; and those attentions to cleanliness during and after the discharge, which, in some climates and nations, as among the Jews, have been made the foundation for positive laws, and which are strictly observed by those who have any sense of propriety, are rather conducive to the comfort of the woman herself, than to the welfare or safety of the society with which she has intercourse. The discharge seems to be a secretion from the womb, but for what purpose it has been so ordered cannot be ascertained. That it has certain peculiarities in its qualities and appearance which distinguish it from every other fluid, is an important fact, because it enables a practitioner to determine, in many, otherwise doubtful, cases, the true state of the patient.

The first of the irregularities to be mentioned, is where the discharge is either altogether *wanting*, or unusually *trifling in quantity*.

In some instances, the ordinary time of life at which this circumstance happens, is attained without any appearance of it, and, nevertheless, health is not in the least affected. Such cases, however, are few, comparatively with those where much distress is experienced from the ineffectual struggle of the constitution.

The complaints from this cause being differently modified in every individual, require such varied

treatment, that it is hardly possible to give even general hints on the subject.

It is incumbent on the practitioner to be assured, before he direct any remedies, that the discharge is not impeded by a mechanical cause, that is, an obstruction of the passage to the womb. This occasionally is met with, and the chief obstacle to its speedy removal is the difficulty of ascertaining its existence. The operation by which it is completely and immediately remedied, is not more painful nor formidable than bloodletting.

The treatment, in other cases, must be regulated by the particular circumstances and constitution of the individual; hence, a course of Harrowgate water, or of sea-bathing, or of the warm-bath, or of preparations of steel, are severally necessary in different cases. There is no remedy adapted to every case of this kind, which explains the disappointment so often experienced in the use of Innes's steel-powders, Hooper's pills, &c. But an open state of the bowels, and a due regulation of the diet, so as to prevent every modification of indigestion, are useful in every instance of this complaint. Warm clothing, too, particularly about the lower extremities, is of most essential benefit. On some occasions, riding on horseback, and on others electricity, have proved successful. When the means ordinarily employed have failed, a change of climate has produced the wished-for effect.

Painful menstruation is the next irregularity to be noticed. This is most commonly the consequence of an imperfect discharge, and is not unfrequently attended with the expulsion of a skinny-like or fibrous substance, which has often imposed upon the woman the idea that she had conceived and had miscarried, a mistake which can only be ascertained by an accurate examination of the substances expelled.

The pain which attends this irregularity, together with the disturbance in the stomach and bowels, and in the whole frame, and the uncertain state of health of the patient, render cases of this kind extremely interesting ; but it must be admitted, that it is not always in the power of the practitioner to do more than to relieve the urgent symptoms.

With this view, for some days previous to the expected period, the warm bath is to be used every night at bed-time, the bowels are to be kept very open by means of aloëtic preparations, if these do not disagree, and exposure to cold is to be avoided. Whenever the first tendency to pain is perceived, one or two tea-spoonfuls, according to the constitution, of the tincture of hyoscyamus, must be taken, and saffron-tea should be drank plentifully. If, notwithstanding these means, the pain become violent, an opiate lavement should be administered, a bladder, two-thirds filled with hot water, should be kept applied to the lower part of the belly, and occasional doses of the volatile tincture of valerian, or

of the dulcified spirit of nitre, according as spasms of the bowels, or difficulty of making water, may occur, should be had recourse to.

The complete cure of this irregularity has, in some instances, been accomplished by means of electricity; in others, by the use of mercury, or of preparations of steel, &c. joined to that of the warm bath; and in others, by cold bathing and tonic medicines.

Sometimes pain attends copious menstruation; but whenever this happens, there is much reason to apprehend some local disorder of the womb.

Suppression or obstruction of the periodical discharge, after it has been fairly established, is a frequent irregularity.

In some constitutions, particularly in those where pain attends the discharge, very slight occurrences or circumstances suddenly interrupt the flow, and prevent its usual return, such as fright, exposure to cold or fatigue, irregularities of diet, change of residence, &c. This fact shews the necessity for certain cautions and attentions during the discharge. Obstruction, too, is sometimes the effect of diseases of the general habit.

Many women experience little inconvenience from missing a period or two, while others suffer a very considerable derangement of the whole system from that cause. Violent headaches, palpitation of the heart, with other nervous affections, disturbance of the digestive organs, swellings of the legs, or even

of the belly, inflammation of the eyes, and obstinate eruptions of the skin, with a variety of other complaints, have sometimes been the consequence of obstruction.

Practitioners have been so often deceived by the accounts of patients with respect to the cause of obstruction, that no woman should take amiss those minute inquiries which every prudent physician deems it his duty to make, previous to his prescribing in any case. Forcing medicines, given in a state of pregnancy, may do irreparable mischief to the patient, independent of the injury which must accrue to the infant.

For the removal of obstruction, bloodletting, brisk purgatives frequently repeated, electricity, the warm bath, mineral waters, neutral salts, preparations of steel and of mercury, and even fox-glove, with various other medicines, have been severally found useful. But as the particular circumstances, indicating the propriety of any of those means, can only be judged of by the practitioner, it is not deemed proper to give in this work any other directions on the subject than the following.

If the complaint seem to have originated from exposure to cold, errors in diet, or passions of the mind, the warm bath is to be used for several nights preceding the time when the discharge should appear, and a gentle vomit or laxative ought to be taken.

When there are evident troublesome symptoms of fulness, bloodletting, frequent doses of cooling

laxatives, and spare living, will prove the most effectual remedies, and are certainly safe, as the same treatment would be proper though there were no *obstruction*.

A very different plan ought to be pursued in cases where there are symptoms of great weakness. Nourishing diet, the moderate use of wine, gentle exercise, the Peruvian bark, a course of steel, mineral waters, and the cold bath, are, in such cases, necessary. A table spoonful of white mustard-seed, evening and morning, or a small cupful of a weak infusion of horse-radish, sometimes produce very good effects; an infusion of chamomile, tansy, balm, or penny-royal, may be employed with the same views.

From the great variety of causes of sexual obstruction, it is certain that many medicines, which possess very opposite powers, may, in different cases, produce the same effects; for the same reason, a remedy which, in one case, may prove mild, inoffensive, and successful, will, in another apparently similar one, occasion the most violent disorder.

Medicines, with a view to restore the periodical evacuation, ought, therefore, to be employed with the greatest caution. No remedy applicable to every case can possibly be discovered; and many cases yield to a proper regulation of diet and exercise, after having resisted all the ordinary remedies.

All forcing medicines should be carefully avoided, as they act by stimulating other parts, and hence their effects are often dangerous, and never certain.

Women who are nervous and delicate, whose health has been impaired by frequent miscarriages, or whose constitution is weakened by a sedentary inactive life, low diet, or any other cause of debility, are chiefly subject to *immoderate, long-continued, or frequent* menstruation.

When the blood evacuated, instead of being purely fluid, comes off in large clots or concretions, attended with a considerable degree of pain, throbbing, or bearing down, the case is highly alarming and dangerous, for it indicates a diseased state of the womb, as the periodical discharge, in its natural state, never coagulates.

Frequent or excessive evacuations are always attended with languor and debility, and loss of appetite, with pain in the loins, and sometimes faintings; and when they occur in a violent degree, anxiety, coldness of the extremities, and hysterical fits, are apt to follow. Universal weakness of the system, which brings on a train of nervous complaints, and swelling of the legs, and a disposition to hectic fever, which may at last terminate fatally, are also the consequences of frequent or excessive menstruation.

The cure depends much on the cause, the constitution, and manner of life of the patient. More in general is to be expected from regular living, and proper diet and exercise, than from medicine.

When the discharge is excessive and dangerous, cooling diet, cool air, horizontal posture, and cold *topical* applications, are the principal remedies. The

patient should be kept as cool as possible, and perfectly at rest, both in body and mind, as long as the discharge continues. Her food should at that time be light and nourishing, but not heating, and should be quite cold. When great anxiety, languor, and faintness occur, light nourishment must be frequently given, and now and then a little cold claret or cinnamon-water, by way of cordial.

It was formerly the practice, in all cases of flooding, both in the unimpregnated and in the pregnant state, to apply cloths, soaked in cold water and vinegar, to the lower part of the belly and to the loins; but experience has proved, that these applications have very little power in checking violent floodings, while they are extremely apt to produce obstinate and severe rheumatic affections. In all cases, therefore, where the discharge is so excessive in the unimpregnated state, as to render it necessary to stop it instantly, a piece of sponge must be introduced into the passage of the womb, and a suitable compress applied externally. In some cases where the living powers seem greatly depressed, or actually sinking, very large doses of opium, in addition to the means now directed, are found to afford the only possible means of preserving life.

In the more ordinary cases of profuse menstruation, which commonly occur, although the discharge cannot be immediately stopped by any internal medicine, it may be moderated. With this view, if the patient be of a full habit, or hot and feverish,

proper doses of neutral salts are to be frequently repeated. But if she be of a delicate feeble constitution, preparations of alum and kino are preferable. Alum-whey is a powerful remedy, and readily procured. The eighth part of an ounce of alum will curdle an English pint of milk; the whey thus prepared must be sweetened to the taste, and a small cupful may be drank as often as the stomach will receive it.

When there is much pain or anxiety, opiates may be given with advantage.

The state of the belly must be attended to; it can be kept gently open by the use of castor oil, or any mild laxative. Glysters, under such circumstances, are improper, from their tendency to increase the discharge.

A light decoction of Peruvian or oak bark, rendered acid to the taste by elixir of vitriol, or a combination of myrrh and steel, may be employed to strengthen the general habit, and to prevent a return of the disorder.

Irregular recurrence of the sexual evacuation may be occasioned by a variety of circumstances; but it most frequently happens from general indisposition, or in consequence of the particular period of life.

Where symptoms indicating diseases of the habit, as weakness, loss of appetite, swelled legs, &c. occur at the same time with irregular evacuation, they

alone should be attended to, for on their being remedied the return of the sexual discharge depends.

Irregularities happening about the forty-fifth or fiftieth year, ought to be imputed to the natural decline of life, and are to be treated as such. Many women, on these occasions, averse to be thought old, flatter themselves that the irregularity is occasioned by cold, or some accidental circumstance, and therefore, very improperly, employ their utmost endeavours to recal it.

When the periodical evacuation is about to cease, the symptoms which occur are extremely different in different women ; for in some it stops at once, without any bad consequence ; in others, it returns after vague and irregular intervals, for several months or years preceding its final cessation. In such cases it has at one time the appearance of little more than a shew ; at another it comes on impetuously, and for some time continues excessive.

The complaints which, in many women, occur at this period of life, are to be ascribed rather to a general change in the habit, than merely to the absence or total cessation of the sexual evacuation.

Although this change is natural to the female constitution, if the many irregularities introduced by luxury and refined mode of living be considered, it will not appear surprising that this period should prove a frequent source of disease.

Women who have never had children, or good

regular health, and those who have been weakened by frequent miscarriages, are most apt to suffer at the decline of life.

On the other hand, it not unfrequently happens, that those who were formerly much pained when out of order, or who were troubled with nervous and hysteric complaints, begin at the cessation of the periodical discharge to enjoy a degree of good health, to which they had formerly been strangers.

If the evacuation should stop at an earlier period of life than usual, and there be no evidence of pregnancy, the nature of the symptoms will point out the proper management.

When no particular complaint occurs in consequence of the decline of life, it would be exceedingly absurd to reduce the strength by an abstemious diet, low living, and evacuations, as has been very often advised.

If, on the contrary, headache, flushings of the face and palms, or an increased degree of heat, restlessness in the night, and violent pains in the belly and loins, swellings of the feet, or eruptions on different parts of the body, take place at this period, there is reason to believe that a general *fulness* exists, in consequence of the stoppage of the accustomed discharge.

Under such circumstances, spare living, with increased exercise, occasional bloodletting, and frequent gentle purgatives, ought to be recommended.

SECTION X.

Sexual Weakness.

THE discharge of a slimy mucus from the passage leading to the womb, which varies considerably in appearance, consistence, and quantity, in different cases, has been styled *sexual weakness*, or, in vulgar language, the *whites*. This complaint is always more or less disagreeable and troublesome, and frequently occasions great weakness, and a train of nervous disorders.

In some cases, the matter discharged resembles thin starch, or the white of an unbroiled egg, and the discharge is unaccompanied with pain or irritation, or any inconvenience, except the unpleasing feeling of relaxation. This degree of the complaint is in many women constitutional, and is chiefly troublesome after fatigue or during pregnancy. It only requires attention to cleanliness, by the regular use of the bidet. When it occurs during pregnancy, it seems a critical evacuation, for if it be suddenly checked, symptoms of threatening miscarriage soon ensue.

If the discharge be attended with pain in the back and loins, and consequent inability to take exercise, while at the same time there is no local irritation and no irregularity of the menstruation, it is to be regarded as an increased secretion of the fluid

which lubricates the passage to the womb. This is the effect of cold, or of mismanagement after miscarriage or delivery. The best remedies are nourishing diet, with a liberal allowance of port or claret wine; the use of some tonic medicines, particularly of an infusion of bark in lime-water, and attention to the state of the bowels.

But if, along with pain in the back and loins, there be the feeling of heat and itching, and uneasiness in making water, while the colour of the discharge is greenish or pale yellow, the disorder is to be attributed to some diseased action of the glands in the passage to the womb, or of the womb itself. This is the effect, in many instances, of fullness of the general habit, and, in other cases, of local irritation; such as disorders of the womb, or of the urinary organs, or a collection, in the gut, of the small thready worms called *Ascarides*. In married women, this modification of the whites sometimes arises from the imprudence of the husband. It is, however, proper to state, that as the most experienced medical practitioner is sometimes unable to distinguish the one case from the other, suspicions of this cause ought never to be entertained, except upon the most satisfactory evidence.

The treatment of this species of the whites must be varied according to circumstances; but, in general, bloodletting, a vegetable diet, the frequent use of cooling laxatives, occasional opiates, and the

injection, several times a-day, of warm milk and water into the passage of the womb, will be found beneficial in almost every case. It is obvious, that, besides these general remedies, the suitable means for removing the local irritation must be employed.

When the discharge has an offensive smell, and the appearance of purulent matter, it indicates some serious affection of the womb, which should be immediately attended to. This is more particularly necessary if it happen after the decline of life.

Another variety of this disorder consists in a thin greenish or brownish discharge, accompanied with constant pain in the back and loins, impaired functions of the stomach and bowels, and generally a pale or pasty complexion. In such cases, the discharge is commonly in greater quantity for a few days before and after menstruation, and that latter discharge is irregular in quantity or colour, or in both, being scanty and watery. The continuance of this disorder weakens the constitution, and also tends so much to impair the vigour of the womb as to prevent pregnancy.

The remedies which have been usually employed in such cases, are, first, Every means by which the stomach and bowels can be strengthened; secondly, Medicines called Alteratives; thirdly, Nourishing diet, the gummy resinous substances, isinglass, and tonics; and, fourthly, Cold bathing, and country air,

and exercise. But it must be admitted, that this complaint is, in many instances, most obstinate, and that, if neglected on its first appearance, it may baffle the skill of the ablest physician.

Some women have the discharge for a day or two of a fluid resembling transparent jelly, about the middle of the interval between the menstrual periods. This is commonly accompanied by a pain in the back or groins, and some of the other feelings which attend menstruation; and the connection between the two is still farther proved, by the discharge at the middle of the period being tinged of a bloody colour, if the patient make any violent exertion about that time.

This variety of whites seems to be the effect of imperfect menstruation, for it continues to recur till the periodical evacuation be rendered regular, both in quantity and duration. This is to be attempted by the usual means, together with a course of Bath or Bristol waters. In some rare instances mercurial preparations have proved successful.

It is an important fact, that both this and the preceding variety are most frequently first brought on by some imprudence in respect to diet or clothing, or exposure to cold or fatigue, or neglect of the bowels, about the time when menstruation begins.

Besides the above varieties, other modifications of this complaint occasionally happen. Such cases

should never be trifled with, for in some constitutions the continuance of the drain may undermine the health, and, in others, the stoppage of it by any astringent may affect materially the general habit. It is the business of the physician to draw the line of distinction in those cases, and it certainly is not possible for the patient herself to do so.

It was formerly the practice, in all cases where the whites proved at all troublesome, to direct styptic liquors to be thrown up the passage to the womb several times a-day, by means of a proper syringe; and, accordingly, in some of the preceding editions of this work, this practice was sanctioned. But experience has now fully convinced the Editor, that much injury has arisen from the indiscriminate use of such remedies. Enlargement of the womb,—obstinate headaches,—violent inflammation of the eyes,—ugly eruptions of the skin,—and even paralytic complaints, have been unequivocally traced to this cause. It required repeated observations to convince the Editor of these facts; but he now considers them to be well established; and for some years he has never prescribed styptic injections till the general habit had been corrected by suitable remedies; and he has invariably found, that unless an English pint of the astringent fluid be thrown up at once, it proves of very little avail.

SECTION XI.

Sterility.

BARRENNESS may arise from inaptitude to conceive, or from inability to retain the conception till it have an organized form; and it is sometimes not easy to ascertain whether it be owing to the former or to the latter cause.

With respect to the former, it is a mistaken notion, that Nature has intended all women to be mothers, for some have original imperfections of the womb which admit of no remedy, because they cannot be detected during life. In some cases, however, inaptitude to conceive depends upon some sympathetic affection, especially disorders of the stomach and bowels, or some irregularity of menstruation, or some state of the passages to the womb, which act mechanically, and may be removed by a surgical operation. It is obvious, that such cases do admit of a remedy; and accordingly, it is well known to practitioners, that sometimes the efforts of the constitution remove those causes, for instances every now and then occur where married women become pregnant at the distance of several years after marriage.

It is extremely difficult, as already hinted, to distinguish those cases where there is an inability to retain the conception till it have an organized form,

because a substance, very like that which constitutes an early conception, is occasionally expelled during menstruation, under circumstances totally unconnected with the married state. This substance, indeed, may be recognised by an experienced practitioner, but not unless he have an opportunity of inspecting it.—This cause of sterility may be more readily counteracted than the former, as it seems to depend very much upon relaxation, or debility, of the womb, and its appendages.

As the proper treatment necessary in cases of sterility from such causes is an object of great importance, since it must conduce to the re-establishment of the health of the woman, as well as to the advantage of mankind, recourse should always be had at once to the advice of practitioners.

SECTION XII.

Obesity.

IN some women there is an extraordinary tendency to obesity, the fat being accumulated under every part of the surface, to such an extent as to render the person unseemly, and the mind torpid. If this tendency, which in fact is a disease, be not checked in its progress, it not only impairs the comfort, but also shortens the life of the individual.

Restriction in diet, regularity of exercise of mind and body, moderation in the indulgence of sleep, and due attention to the state of the bowels, may generally prevent the occurrence of this unpleasant state of the body. But should these means fail, it will require the utmost exertion of resolution, to persevere in the privations which become necessary to restore the body to its natural healthy condition. The chief of these means are, abstinence from liquids, vegetable diet, violent exercise, little sleep, and such medicines as tend to promote absorption.

SECTION XIII.

Cutaneous Eruptions.

MANY women are liable to eruptions of the skin, unaccompanied with fever, or any apparent derangement of the general health. These eruptions are extremely various in the parts which they infest, and in their form and colour. In many cases, the legs, or arms, or neck, or back, are alone affected, and perhaps in the greater number the face is the seat of the eruption. The form is sometimes that of a rough dry scurf, sometimes that of distinct pimples, in some instances that of fiery scabby pustules, and in others that of an extensive scab, with a moist surface. The colour is equally vari-



ous, being like that of oat-meal, or of bright copper, or brown, or yellowish, or purple. A most disagreeable smarting or itching, or sense of heat on the surface, attends the eruption in many cases.

Irregularities in the menstrual discharge, confinement within doors, indigestion, affections of the biliary system, and improper diet, are supposed to be the principal causes of those eruptions. In some constitutions, particular articles of food, such as almonds, some kinds of fish, &c. occasion, within a few hours after being swallowed, an alarming eruption all over the skin, together with feelings of general indisposition ; but these effects are only temporary.

In the treatment of eruptions of the skin, the first object to be attended to, is to ascertain whether there be any irregular action in the digestive organs or in the functions of the womb, of which the eruption may be an indication or an effect. If this prove the case, the appropriate means ought to be adopted.

Should there be no evidence of any affection of the internal parts of the body, the diet and exercise of the individual are to be properly regulated, the bowels to be kept open by the use of neutral salts, and frequent ablution of the skin with warm water, or water in which the bran of flour has been boiled, are to be recommended in every case. Besides these general means, some topical application to the eruption ought to be advised. Lime-water, prepara-

tions of mercury, of which one of the most common forms is Gowland's lotion, a mixture of chalk and camphor, in the proportion of nine parts of the former to one of the latter, diluted vinegar, and lemon-juice, the tar-water, and many other applications, have been severally found useful. In some obstinate cases, very large doses of Peruvian bark, or a course of mercury, or of Harrowgate water, or of the decoction of the woods, or mezerion, or of Spilsbury's drops, or of preparations of sulphur and antimony, have succeeded after every other means have failed.

On the subject of itch, syphylitic blotches, and the eruption of the face, attended with loss of substance, commonly called Scorbutic, it would be improper to make any observations in this work.

SECTION XIV.

Hysterical Complaints.

THIS very curious disease appears in such a variety of modifications in different individuals, that it would require a volume to give an accurate description of it. All that can be attempted here, therefore, is a sketch of its most ordinary appearances.

In the regular hysteric fit, the patient is first seized with a pain in the left side, which gradually

affects the whole belly ; this is sometimes preceded by, or accompanied with, sickness and vomiting, and always by a copious and frequent discharge of limpid urine. By degrees a sense of suffocation is felt in the throat, which seems to the patient to be occasioned by a ball mounting up to it from the stomach. These symptoms are commonly attended with violent sudden fits of crying and laughing, the transition from the one extreme to the other being rapid and unexpected, and by convulsive motions of the whole body ; and they are often followed by stupor and faintings, from which the patient gradually recovers, after having for a considerable time sighed deeply. In many cases a violent pain in the head supervenes.

This disease occurs most frequently about the time of the periodical evacuation. Women who are robust, healthy, and full, or inactive, and those who feed highly, and are subject to profuse menstruation, are most liable to this complaint. It generally attacks them from the age of fifteen to forty-five.

The cure of regular hysteric fits can only be accomplished by spare living, a careful attention to the state of the belly, and by the use of those means which have been recommended to promote the periodical evacuation.

The symptoms which immediately constitute this disease may be removed, where violent, by blood-letting and a brisk purgative, along with the warm

bath. The first of these remedies is only necessary where there are strong marks of fulness in the vessels of the face or head. If the stomach seem loaded, or if the patient have any tendency to vomit, chamomile tea, with a few drops of hartshorn, or a dose of ipecacuanha, should be exhibited.

Those who have been subject to this disease are often troubled with threatening symptoms of it, especially when exposed to cold, or suddenly affected with any violent emotion of the mind. Bathing the feet in warm water, the horizontal posture, and drinking a little warm white-wine whey or negus, prevent the progress of the disease in many cases.

Women who are of a very delicate irritable constitution, whose feelings are acute, and whose habit is weak, are often attacked with symptoms which resemble some of the hysterical ones.

These symptoms differ from those attending regular hysteric affections, by their being less violent, by their occurring at vague irregular intervals, seemingly unconnected with the periods of menstruation, and by their affecting only women of weak, irritable, relaxed habits.

Palpitation of the heart, with breathlessness, is a very common variety of irregular hysterics, and is sometimes of long continuance, and extremely alarming in appearance.

The treatment of these disorders must be very different from that of regular hysterics; for the re-

medies necessary in the former would prove highly improper in the latter. They require the employment of every means which can strengthen the system, along with variation of scene, and agreeable, cheerful company.

Opiates in these disorders are more beneficial than in the real hysterical affections: though in both they must be occasionally had recourse to, in order to palliate troublesome symptoms; yet the habitual use of such remedies must be carefully guarded against. Valerian, camphor, musk, and the other medicines commonly styled Nervous, are the suitable remedies for this disease; but they ought never to be prescribed in a spiritous form.

On some occasions hysterics put on the appearance of several disorders, such as melancholy, epilepsy, palsy, inflammation of the lungs or bowels, gravel, &c. It requires, in those cases, not only the most unremitting attention, but also the utmost practical discernment, to distinguish the true disease from that which it resembles.

When the symptoms are not uniformly and regularly those which occur in the ordinary cases of the disease imitated; when there suddenly seems great danger, without those previous changes in the progress of the complaint which are usually met with; when there is either a natural state of the pulse with alarming symptoms, or a very frequent irregular pulse, without any affection of the breathing or shrinking of the features, there is reason to suspect

hysterics as the true disorder. Cases from time to time occur, where it is impossible to ascertain the real nature of the affection till towards its termination. The fact, too, that in every acute disease of women which requires copious evacuations, or which debilitates the system, hysterics are apt to occur in the progress to recovery, adds much to the difficulty of judging precisely in any given case.

The late eminent Dr Parry of Bath, recommended long ago a continued course of purging for the cure of hysterical complaints, and the Editor of this work has had some striking proofs of their efficacy, where every other remedy had been previously tried, by very able practitioners, without any success. The laxative medicines he has employed in such cases were neutral salts, assisted by the compound extract of colocynth, and he has always continued their use till the evacuation from the bowels became natural. He has found it necessary after a time, different in different cases, to add some tonic medicines to the laxatives, and to recommend the daily use of the cold bath. It may be unnecessary to remark, that in every case a great deal depends on the due regulation of the diet.

SECTION XV.

Indigestion.

AMONG the higher ranks of life, and among those individuals who are confined to the house by sedentary occupations, indigestion is a very frequent disorder. Indeed a great proportion of the chronic complaints of women arises from this cause.

The ordinary evidences of indigestion, such as thirst, heart-burn, water-brash, flatulency, costiveness, want of appetite, sickness, &c. are so well known, that it is unnecessary to describe them formally. But there are some complaints in consequence of it, which may be supposed the effects of other causes. Headache, drowsiness, flushings of the face, swellings of the feet and hands, emaciation, dry or scurfy skin, alterations in the appearance and quantity of the urine, voracious or capricious appetite, depression of spirits, sense of universal lassitude, pains in the back, loins, or limbs, sallowness of the complexion, dulness of the eyes, and even violent fits of coughing, are occasionally found to originate entirely from indigestion.

Many of those disorders are commonly alleged to be bilious, that is, induced by an accumulation of bile. This, however, in the temperate climate of Europe, is more frequently the effect than the cause of indigestion; for the functions of the liver

cannot be healthy or natural, where the other bowels concerned in the digestion of the food are impaired in their powers.

The condition and appearance of the stools, in many cases, have been supposed to afford evidence of a disordered state of the liver. They are often so acrid, and fetid, and discoloured, that they might be readily supposed to have been detained in the intestines for weeks, or even for months; when in fact they are formed daily by a diseased action of the biliary system. The proofs of this seem conclusive. In cases of protracted fevers, notwithstanding the almost total abstinence from food, the utmost attention to the state of the bowels cannot produce the evacuation of stools of a natural appearance, till the declension of the disease, when that change spontaneously happens. The necessity for varied purgative medicines, in cases of disordered bowels, affords an additional evidence of the same fact, for such means are calculated to change the action of the biliary system *.

Indigestion, it is well known, may be prevented by moderate exercise of the mind and body, and due attention to diet and clothing. It is therefore quite unnecessary to dwell on the utility of regular exercise of mind and body, as that is uni-

* See the valuable Work of Dr Hamilton senior, Physician to the Royal Infirmary, on the Utility of Purgative Medicines.—Printed for Bell and Bradfute, 1823.

versally acknowledged. Nor need the remarks on the subject of diet be very extended. The proper rule obviously is, never to overload the stomach, either by the quantity or the quality of the food. In regard to the proportion which vegetable substances should bear to animal matter in the diet, that must be regulated by the experience of the individual; for although, in general, a large proportion of vegetables contributes to health, there are sometimes exceptions to this more ordinary law. In many cases, too, an occasional course for a few weeks of what is called strictly animal diet, is found highly beneficial; but this ought never to be continued longer than the necessity of the case requires, for it may produce a corrupted state of the fluids, from which the most dangerous consequences may ensue.

As to the effect of clothing upon the process of digestion, there are few persons who have not felt very disagreeable proofs of its influence, and yet it would seem that little attention has been paid to the fact. How often has violent colic been the immediate consequence of wet feet, or of sitting in wet clothes? How often has cold applied to the skin very quickly occasioned pains in the stomach and bowels? In fact, there is such a sympathy or consent between the skin and the internal parts of the body, particularly the lungs and digestive organs, that whatever makes any considerable impression on it, cannot fail to affect them.

Where indigestion has actually taken place, and

has been allowed to become habitual, it is very difficult of cure. Were it possible to change entirely the mode of living of the patient, this difficulty would not exist; but that being impracticable, physicians must adapt their directions to the circumstances of their patients. It must be of importance, therefore, to point out a method by which individuals compelled to lead a sedentary life (the case of many women) can prevent indigestion.

The first rule to be attended to is, never to allow the stomach to be for any considerable length of time quite empty of food, for the natural juices which are formed in it prove, under such circumstances, a cause of irritation. Fasting from an early hour in the morning to a late hour in the afternoon, is a most dangerous custom, and has certainly been often the chief cause of diseases of the liver, and of hardness and thickening of the stomach itself.

The second rule is, to endeavour by diet to supply the stimulus to the stomach which exercise is calculated to afford. This is the proper use of spices; and, accordingly, a weak infusion of ginger at breakfast, as a substitute for tea, and a little pepper or horse-radish mixed with the food at dinner, are commonly found to improve greatly the powers of digestion.

Thirdly, the intestines require, like the stomach, some artificial stimulus to supply the defect of the natural one. A few grains of Turkey rhubarb,

taken an hour before dinner, with occasionally an aloëtic pill or two at bed-time, most generally answer this purpose.

Lastly, in all cases where sedentary life cannot be avoided, a smaller quantity of food than the appetite prompts should be taken at each meal.

For the cure of indigestion, the chief means, unless where the urgency of symptoms requires emetics, are, repeated and varied powerful purgatives, continued till the stools become of a natural colour and consistence, abstinence relatively to the former habits of the individual, and light bitters. In some cases, preparations of mercury as alteratives, in others, a course of Harrowgate or Cheltenham water, and in others, a tea-cupful of lime-water, twice or thrice a-day, have been necessary to restore the functions of the stomach and bowels. Some cases of very long standing have yielded to the use of a small dose of any aromatic tincture taken daily when the stomach is empty.

Where, along with indigestion, there are frequent gnawing pains in the stomach, with emaciation or dryness of the skin, or swelling of the feet towards night, the case requires the most serious attention, as there is much reason to dread some diseased state of the stomach or intestines.

SECTION XVI.

Intemperance.

ON this subject it is impossible for any practitioner to talk with a patient, until she have so completely blunted her feelings of propriety by her notorious irregularities, that what he might say could be of very little avail. It cannot therefore be deemed improper, in a work of this kind, to explain the fatal consequences of indulgence in the abuse of intoxicating liquors, and to suggest the means by which that unfortunate habit may be abandoned, and its effects removed.

Women have a better excuse than the pleasures of conviviality for the use of fermented liquors. They are, in many instances, led to it from distress of mind or body. At first, a small quantity of wine or of spirits soothes their feelings, but, by degrees, a larger quantity is found necessary. The languor and thirst, which by and by ensue in a few hours after every indulgence, seduce the woman to a repetition of the dose, and, in a short time, she supposes she can hardly exist without a quantity of drink, at which she would formerly have recoiled with disgust, or even with horror.

In some constitutions, it must be admitted this practice may be continued for a long time before its

effects on the body are very apparent. The habitual looseness of the bowels in some, seems to counteract the poison that is swallowed; and the violent sickness, which occasionally happens in others, by interrupting for a time the injurious practice, gives a temporary respite to the digestive organs. But, sooner or later, both body and mind suffer from this cause. Eruptions on the skin, indigestion, emaciation, tremor of the limbs, swelling of the legs, headache, loss of memory, inactivity or dejection of mind, are the first symptoms. If these warnings be not attended to, dull pain in the right side, extending to the shoulder, jaundice, occasional bleeding at the nose, dropsy of the belly and legs, and finally, profuse discharges of blood from the intestines, succeed. Delirium commonly closes the melancholy scene. The progress to this termination is, as already hinted, sometimes very slow, so that some women have dragged on a life of intemperance for above twenty years; but there have been many instances where less than two years have been sufficient to produce all the fatal symptoms of this irregularity.

The habit of indulging daily in the use of opium is equally prejudicial to health, and, although it may be longer concealed from the world, its pernicious effects are often more rapid in their progress than those arising from drinking spiritous liquors.

In all cases of bad health from intemperance, it

is not easy, at first, to detect the cause, unless the patient have been unusually imprudent ; and, consequently, it is seldom in the power of the practitioner to suggest the appropriate remedies at the time when they would be the most certainly efficacious ; for it would be too much to expect that a woman who cannot refrain from this immorality, should have fortitude of mind to confess her weakness. But, when the complaints have made a certain progress, every practitioner of discernment must at once discover their nature.

In the treatment of such complaints, the first and great object ought to be, to wean the patient from her improper indulgences. The means necessary to accomplish this are various in different cases. Where the constitution is not yet materially injured, and the habit has not been of long continuance, the immediate prohibition of every stimulating liquor may be safely prescribed. But when the strength has begun to decline, and the digestive organs are much weakened, any sudden change might rapidly sink the living powers. Under such circumstances, prudence requires that the stimulus be withdrawn by degrees, at first changing its form, while, by the use of the warm bath, proper laxatives, and light nourishment, the tone of the stomach and bowels is to be restored. It will be found necessary to persevere steadily in this plan for at least several weeks, till at last the use of all stimulating liquors may be relinquished without injury.

After the habit of intemperance is fairly subdued, it is a matter of most serious importance to repair the injuries which the constitution had suffered. The warm or the cold, or shower bath, according to circumstances; warm clothing, regular exercise, and a course of Bath waters, constitute the chief means. Where the patient cannot, without inconvenience, go for a few months to Bath, some substitute for that water may be contrived. Thus, two grains of the sulphat of iron, and one scruple of Glauber's salt, may be dissolved in half an English pint of boiling water, and this being mixed with as much simple aërated water, may be drank evening and morning.

In cases where the liver, or some other internal parts, seems unequivocally diseased, or where the constitution is quite broken down, it would be cruel to insist on a total abstinence from all stimulants. It is well known that a physician is bound to relieve when he cannot cure.

CHAPTER II.

PREGNANCY.

THE particular manner in which pregnancy takes place has hitherto remained involved in obscurity, notwithstanding the laborious investigations of the most eminent philosophers of all ages.

Pregnancy is, in civilized society, the source of many disagreeable sensations, and often the cause of diseases which might be attended with the worst consequences, if not properly treated. But it is now well known, that those women who bear children, enjoy usually more certain health, and are much less liable to dangerous diseases, than those who are unmarried, or who prove barren.

SECTION I.

Changes produced on the Womb by Impregnation, &c.

THE womb, from a very short time after conception, has an increased quantity of blood sent to it, but its enlargement advances at first very

slowly. It is seldom sooner than between the third and fourth month that it can be felt rising out of the bones, and, at the completion of the fourth month, it is not larger than an ordinary sized Florence flask. At the end of five months, its bottom can be perceived half way between the share bones and the navel, and from this period it rises daily higher in the belly till at last it reaches the pit of the stomach. Extending also in breadth, it stretches from side to side. Its shape, at the full time, resembles that of an egg, the narrower end being placed downmost, and it commonly measures about thirteen inches in length, by nine or ten in width.

In tall slender women the womb increases proportionally more in length, than in short, squat women, in whom it expands considerably towards the sides. It always lies before the intestines, so that these form a soft elastic cushion interposed between it and the great bloodvessels which proceed along the spine. This occasions that peculiar hardness at the fore part of the belly, and that elastic feel at the sides, by which, in the latter months, pregnancy may be so readily distinguished from disease. Although it extends to the pit of the stomach, it is not fixed to any part higher than the bones of the basin. By this, its natural contraction after delivery tends to return it to its original situation. The same circumstance, however, renders it apt to be

turned inside out, if rash efforts be used in extracting the after-birth.

In proportion as the womb increases in size, its substance becomes more and more spongy, so that at the end of pregnancy it is apt to be burst, not only by external or mechanical injuries, but even, too, by its own violent action in its efforts to expel the child. From a short time after conception, generally till labour begins, its mouth is closely sealed up by means of a gelatinous substance.

The vagina is also gradually increased in size, so that when delivery takes place, it readily admits of the passage of the child. Of the changes in the appendages of the womb, it is unnecessary to say any thing in this work.

With respect to the child, above four weeks elapse after conception before any distinct appearance of the future infant can be perceived, and even at the end of eight weeks, although the form of the different parts, as the head, body, and limbs, is accurately enough marked out, the size of the whole does not equal more than two inches in length. From the twelfth to the sixteenth week, the external figure becomes perfected, and the size increases to between six and eight inches ; after which, the occasional movements of the infant being felt by the mother, it has been in popular language said, that the child quickens. But if by this term it be meant that the infant first lives, it is a most erro-

neous idea, for from the moment of conception it is alive, and its very minute size obviously is the reason why its movements are not perceived in the earlier weeks.

At the end of five months, the infant's size is nearly double what it was at the completion of four months, and this size is again nearly doubled by the commencement of the eighth month. At the full time, or nine calendar months after conception, the ordinary size of the infant is twenty inches in length, and its weight equals seven pounds avoirdupois. But there are many deviations from this standard. Some do not exceed sixteen or seventeen inches in length, and five pounds in weight; while others weigh nearly fourteen pounds, and measure above twenty-four inches. This difference in size and weight renders it extremely difficult, it may be said impossible, to determine, in many cases, whether the infant have attained to its maturity or not. The ordinary marks of hair on the head, nails on the fingers and toes, usually depended upon by those unaccustomed to consider this subject, are quite fallacious; and although there be certainly marks by which it can be unequivocally determined whether the infant have not exceeded the sixth month and an half, it would be an imposition on the credulity of mankind to allege, that after the seventh month the exact age of the infant could be ascertained by its general appearance, or its size and weight.

To protect the child, while in the womb, from the numerous accidents to which it might be exposed from the exertions or imprudences of the mother, a most simple and effectual apparatus is provided. Not only is it inclosed in a bag, and surrounded by a quantity of water, but also is it nourished by means of a substance similar to a sponge, by which the blood of the mother does not run directly into its system.

In the early weeks, as at the end of the month, the whole conception consists of a small sac or bladder, not larger than a gooseberry, of a globular form, connected to the womb by means of a membrane, into which a great number of bloodvessels, infinitely smaller than the hairs of the head, are continued from the inside of the womb. This little bag contains the minute embryo not larger than a fly, attached by a small thread, and surrounded by a little clear water. At the end of eight weeks, the conception, still nearly globular, is of the size of a hen's egg, and that part into which the thread that connects the infant to it is inserted, is a good deal thicker than the rest. The outer surface of the conception is now closely united, by means of innumerable bloodvessels, to the inside of the womb.

But the proper structure of the apparatus by which the infant is protected and nourished, is not distinctly visible till about the completion of sixteen weeks. It is then found, that the sac inclosing the child is composed of three different layers, the outer

of which is sealed to the inside of the womb by hundreds of bloodvessels, while the other two are quite transparent, and, as far as can be judged, contain no vessels carrying red blood. Between these two and the other, a thick spongy mass called the After-birth is interposed. Into the surface of this mass which is next the womb, the blood from the mother is poured, and over the other surface the bloodvessels of the infant, passing from its belly along what is called the Navel-string, are distributed in very small branches. In other words, the after-birth next the womb is made up of cells, like those of a sponge, which are regularly filled with the blood of the mother, while the minute bloodvessels of the infant, like the feeders of a plant, creep over the surface of those cells. The water is at this period in such quantity as to surround the child, and thereby to prevent its being, excepting occasionally, in contact with the sides of the cavity in which it is thus included.

Towards the completion of the term of pregnancy, the shape of this sac is irregularly oval, like that of the womb; the after-birth is nearly round, extending six or seven inches across, and is placed commonly towards the upper part of what is called the bottom of the Womb; and the water is in small proportion comparatively to what it had been in the early months. The infant lies generally with its head downmost, and with its limbs so bent and folded together, as to occupy wonderfully little room,

like the chick in the egg just before it breaks the shell. When there are twins in the womb, each infant is included in a separate bag, and attached to its own proper after-birth. The head of the one infant lies towards the breech of the other.

By means of the apparatus thus imperfectly described, (from the difficulty of conveying an idea of the subject without the use of technical terms, and of delineations of the appearances), it may be understood that the infant, while in the womb, is admirably defended from external injuries ; but it may not be very obvious how it is nourished, and by what contrivance its increase of bulk is accomplished. There is every reason to believe, that the after-birth serves this purpose ; and, accordingly, the quantity of blood sent to it always keeps pace with the size of the child. Thus, in the early weeks, the vessels which run from the womb to the after-birth are not so large as the hairs of the head ; while, in the latter months, many of them are as large as an ordinary writing-quill ; and the number of the vessels always corresponds with the extent of its surface ; for, at every period of pregnancy, it is found, that a separation of the slightest portion of the after-birth is productive of the bursting of numerous bloodvessels.

In cases of plurality of children, each infant being included within a separate sac, and nourished by a proper after-birth, is designed to prevent the one infant from impeding the birth of the other. On

some rare occasions, the after-births of twins or triplets are blended together,—a circumstance which, unless properly attended to, may endanger the life of the second born.

SECTION II.

Effects of Pregnancy upon the General System.

FROM the time that impregnation has taken place, the periodical discharge ceases to return, and, in most cases, this affords to the woman the first evidence of her situation. Soon after this, many individuals become very much altered in their looks, and have peculiarly irritable feelings, inducing a disposition of mind that renders their temper easily and involuntarily ruffled, and incites an irresistible propensity to indulgences and to humours, from which, on other occasions, they are totally exempt.

Sickness at stomach, particularly in the morning, languor and faintishness all forenoon, heart-burn and feelings of oppression during the evening, with disturbed sleep and frightful dreams, supervene in the majority of cases, soon after the second period is passed. An uneasiness about the navel, with the sense of painful tightness of the breasts, are also common symptoms at this period.

Towards the end of the fourth month, the lower part of the belly becomes perceptibly enlarged, and

soon after a fluttering motion is occasionally perceived, which is in fact the movement of the infant. This, at first, is in many women accompanied with various nervous affections, which cease on the individual becoming accustomed to the feeling.

The morning sickness, and the relaxation of the features, commonly go off soon after quickening, and the vigour of the system seems renovated. From this period the appetite for food usually is keen, but the woman is still troubled with heart-burn, indigestion, &c. The distension of the belly, which now progressively increases, produces many uneasy sensations, as pain in the back, numbness of the lower limbs, and an inability to remain long in one position, or to take any violent exercise in walking, &c.

Towards the latter months occasional pain in either side, hardness in the breasts, swelling of the legs, or flushing of the face after meals, with restlessness while in bed, and, in many instances, great uneasiness, from the movements of the infant, are the complaints chiefly mentioned by women themselves.

From many of the circumstances thus enumerated, some women are totally exempt, so that they enjoy the ordinary health during the whole of pregnancy, and look so well, that till the size of their belly indicates their situation, an unconcerned spectator could not know that they were in the family way. Other women suffer a degree of distress from

the moment they have passed the first period, which not only embitters life, but also induces serious alarm. In some women, too, there are certain teasing complaints, which, though they do not impair health, occasion a great deal of uneasiness, such as most painful toothache, or hard barking cough, and these symptoms are most apt to happen in individuals who are not ordinarily liable to such complaints.

The cause of the derangement of the general habit during pregnancy, must be an interesting subject of inquiry, as, were it understood, means might be adopted for preventing or counteracting it. The common explanation, that it arises from sympathy between the womb and other parts of the body, is extremely unsatisfactory, because, in cases where the conception becomes blighted, the breeding symptoms cease from the moment the infant dies, although (which sometimes happens) it should remain for weeks or months in the womb. Under such circumstances, the bulk of the womb is not altered, and hence the sympathy between it and other parts cannot be affected. This opinion is unsatisfactory on another account, viz. that no practical good could be derived from it ; for we know of no means by which the sympathy between the womb and other parts of the body could be weakened or interrupted.

But, on the supposition that the affection of the general system, during pregnancy, is produced by the new actions which take place, for the purpose

of supplying the infant with the principles of life, not only is a rational explanation of the symptoms afforded, but also is the method of preventing or of mitigating them ascertained. That this is the true cause of the whole derangement of the system, is rendered probable by the fact already stated, that they cease on the death of the infant, and by the additional fact, that most commonly the breeding symptoms are less and less severe the more children a woman has. Accordingly, the ordinary complaints during pregnancy seem to be the immediate effects either of a disturbed action of the stomach and bowels, or of the formation of too much blood. The increased susceptibility of impression of the nervous system, from which many disorders arise, is to be regarded as the natural consequence of the two former circumstances.

Whether this explanation be the true one or not, it is certain that the plan of preventing or of mitigating the usual complaints during pregnancy, founded upon it, is not a little successful. It consists chiefly in regulating duly the actions of the stomach, and other digestive organs, and in preventing the formation of too much blood while the size of the infant is very minute.

SECTION III.

Of the Signs or Evidences of Pregnancy.

THERE are certain circumstances which invariably accompany pregnancy, viz. suppression of the periodical discharge, change upon the breasts, the sensation of the motion of the child, and progressive increase of size of the belly. Where these take place in the succession described, there can be little doubt of the condition of the individual ; but many cases occur, where there is such a complication or modification of symptoms, as to render it impossible to determine whether the woman be pregnant or not till after the sixth month.

That pregnancy cannot happen without the suppression of the accustomed discharge, is a fact of which it is not easy to convince women themselves, and to which many respectable practitioners do not assent. Yet there is no fact in physic better established. It is proved both by reason and by observation : by reason, because during pregnancy not only is the mouth of the womb closed up, but also are the vessels from which the periodical evacuation proceeds, covered by the membranes of the conception ; and by observation, because no well-authenticated case of a pregnant woman being regular was

ever witnessed by a practitioner who could judge of the circumstance.

The occasional occurrence of an irregular discharge of blood, or of bloody serum, proceeding either from the mouth of the womb or from the vagina, has led to the erroneous opinions which have prevailed on this subject. Such discharges may in general be distinguished from the natural one, though, it must be admitted, that cases sometimes are met with, where it is not easy to determine the difference.—On the other hand, it is obvious, that the suppression of the accustomed evacuation may happen independent of pregnancy, and, consequently, unless some other sign follow, that alone is not to be depended on.

The change in the appearance of the breasts is scarcely perceptible, in general, till after the third period be passed. It consists, both in an enlargement of the breast itself, and in a change of colour on the skin surrounding the nipple. This latter change is the invariable one; and yet it is not so definite as to enable a practitioner to recognise it in every case; and, besides, it is chiefly distinguishable during a first pregnancy. In fact, the kind or shade of colour differs so much in different individuals, both before impregnation and after it, that it is only by pretty extensive experience that any practitioner can learn to ascertain pregnancy from this mark.

It is well known that the sensation of the motion of the child, although particularly described by the woman herself, is a most fallacious sign, unless it can be felt by the practitioner, or an attendant who is a competent judge of the subject. Many circumstances may tend, in a woman anxious to be a mother, to impose the belief that she feels the motion of the infant ; and even women who have formerly had a family, have often been known to have deceived themselves in this respect.

No sure dependence can be placed on the last sign enumerated, the progressive increase of size of the belly. Few women have fancied themselves in the family way, who have not had this enlargement. In some it has evidently proceeded from an accumulation of fat from want of exercise, &c. ; in others, it has been the effect of obstruction, and in many it has been impossible to account for it.

Most healthy women have, during the latter months of pregnancy, a quantity of milk in the breasts, yet it is a curious fact, that a fluid at least resembling milk in colour and taste, has in many cases been squeezed out from the breasts, where the woman not only was not, but never had been pregnant.

From these observations it may be collected, that in many instances it is impossible to distinguish

pregnancy sooner than the fifth month; and it may be added, that even at that period it is sometimes not in the power of the practitioner to give a decided opinion on the subject, without feeling the state of the womb, which in some cases might be productive of hazardous effects, and which, in every instance, must be particularly disagreeable to a woman of delicacy. After the seventh month, the mere feeling of the belly is commonly sufficient to enable any one accustomed to the subject to discriminate pregnancy from every other condition of the system.

It is an unfortunate circumstance, that women, who suppose themselves pregnant when not so, have to combat the sneers and jokes of their female friends, as well as the disappointment of their wishes. This consideration leads them so often to blame the practitioner, who had not chosen, or had not been able, to undeceive them, when first consulted. But it is obvious, that whenever there are any causes for doubt, no harm whatever can accrue from treating the patient as if pregnant, till the period at which the case can be no longer ambiguous; while much mischief might ensue from an opposite practice, for an infant might be lost, and the woman's own health irreparably injured.

SECTION IV.

Circumstances which induce Symptoms resembling those of Pregnancy.

It is a well known fact, that on some occasions imagination alone leads women to suppose themselves pregnant. Of the very trifling circumstances on which this supposition is sometimes founded, it is in this work quite unnecessary to treat.

Obstruction, or the suppression of the usual periodical discharge, is, in women especially who have been married at a late period of life, the chief evidence by which they are flattered with the expectation of being a mother; and there can be no doubt that it affords a very strong presumptive proof in favour of the opinion, more especially if it be continued for several months.

But women should know that obstruction is the consequence of many other causes besides pregnancy; and that, unless it be followed by the other circumstances already detailed, it should not be depended on. For the first three or four months it may induce the practitioner to decline giving an opinion; but after that period there can seldom be much difficulty in distinguishing the case.

Indigestion sometimes produces appearances resembling those of pregnancy, such as sickness, heart-

burn, languor, distention of the belly, &c. These symptoms, however, can only impose on the woman herself, for the practitioner can readily detect their true nature. The same observation may be applied to dropsical complaints, which, on their first occurrence, sometimes imitate those of pregnancy.—But there are two cases which frequently occasion much embarrassment, both to the patient and the practitioner.

The first of these is where, after the woman had actually conceived, the conception has become blighted, and is not thrown off. In some instances the conception has thus been retained till the seventh or eighth month, or even to the full time. Under such circumstances, the ordinary breeding symptoms having occurred, along with continued obstruction, and an alteration in the state of the breasts, the patient herself must be convinced that her situation is not doubtful, while the absence of progressive increase in bulk, and the unequivocal evidence that the womb is not perceptibly enlarged, lead the practitioner to imagine that there is no pregnancy. It is not till after a considerable time has elapsed, that the true nature of the woman's situation can be ascertained.

What is called an *Extra-Uterine Conception* is the other case alluded to. This is so very rare an occurrence, that for the last fifty years scarcely more

than half a dozen instances of it have happened in this city or neighbourhood. In such cases, the conception, instead of being lodged within the womb as usual, is placed in the belly, or in some of the appendages of the womb. As this case is so seldom met with, it is quite unnecessary to describe the symptoms by which it can be recognised, more especially as such a description might excite false alarms in some anxious minds.

The treatment, in cases where circumstances resembling those attending pregnancy have occurred, must be varied according to the exigencies and peculiarities of the individual patient.

SECTION V.

Of Sickness and Heart-burn, and Unnatural Cravings for Food.

BREEDING SICKNESS, when it does not materially impair the general health, is to be regarded as a favourable symptom, because it certainly tends to prevent the formation of too much blood in the early months, which is one of the chief causes of abortion. But on some occasions, along with the sickness, there are violent strainings and retchings, with emaciation of the body, and great debility, inducing the most alarming nervous complaints. It

is a curious fact, that however violent the retchings may be, they very seldom occasion miscarriage.

When the sickness is allowed to become very severe, it is extremely difficult even to moderate it; while, on the other hand, if it be attended to in time, it can be greatly mitigated. Small bleedings, an open state of the bowels, and proper regulation of the diet, are the means usually found efficacious in those cases. It is seldom that tonics or cordials prove of any avail.

HEART-BURN.—The uneasy sensation produced by heart-burn, though commonly confined to the early months, sometimes accompanies every stage of pregnancy.

This complaint often originates from less degrees of those causes which occasion sickness and vomiting: hence, in different cases, it requires a variety of treatment.

Thus, when the heart-burn is attended with a constant desire to hawk up phlegm, the stomach should be emptied by a vomit, the state of the belly is to be duly regulated, and small doses of the Peruvian bark and vitriolic acid ought to be taken once or twice a-day

On the other hand, if the complaint be accompanied with a sour taste in the mouth, and acid eructations, lime-water, prepared chalk mixed with water, or magnesia, afford the best palliatives. The belly should be kept gently open by means of

magnesia and rhubarb. Gross food of every kind is to be avoided, and the stomach ought never to be overloaded.

But when the uneasy burning pain produced by this disease is not attended with an inclination to hawk up phlegm nor acid eructations, a little fine Gum-Arabic, or a spoonful of a fluid prepared by mixing the white of an egg with a little sugar and water, so as to make it of the consistence of thin syrup, taken occasionally, will in many cases moderate the pain. If the patient, with such symptoms, have any marks of fulness, she should lose blood.

Heart-burn, in the latter months, may be relieved, where the magnesia fails, by a preparation of pure ammonia; but this should never be used without the advice of a practitioner.

UNNATURAL CRAVINGS.—Pregnant women have often unnatural cravings, or what are termed Longings, which, however absurd they may appear on some occasions, are frequently entirely involuntary. Where they are confined to articles relating to diet, this may always be considered to be the case.

These cravings seem to proceed from the state of the stomach, for they often occur in men whose stomachs are disordered. The peculiarly irritable state of the mind during pregnancy, already taken notice of, probably increases the violence of cravings, that might, under other circumstances, be felt only as transient desires.

Longings for articles of food should, unless where the indulgence might be followed by disagreeable consequences, be in general gratified ; for when the appetite is feeble, and the powers of digestion impaired, the stomach often rejects particular substances, and retains others, which, though seemingly preposterous, are found to agree with it.

Although, therefore, unlimited compliance with every desire might be improper, yet the wished-for substance, where it can be easily procured, should be allowed, as it may perhaps agree well with the stomach, and as disappointment, in the irritable state of early pregnancy, might induce passions of the mind that would be productive of many unpleasant effects.

Women often claim indulgence in their longings, by an argument well calculated to insure success, the dangers which might happen to the child from their cravings being neglected.

Although at present the idea of the imagination of the mother having power to produce marks on the body of the infant, does not so universally prevail as it did formerly ; yet many people, judicious and well-informed in other respects, still seem to favour this opinion ; and, therefore, it may be useful to state shortly the arguments by which it appears that the shape of the infant cannot be influenced by any effort of the mother's mind.

Many cases might be adduced, where infants were born with marks on the skin (vulgarly called

flesh-marks) where the mother had never been conscious of any longings; and many instances might also be cited, where women have been refused the indulgence of their longings, without any bad consequence to the child, although their imagination had continued to dwell on the subject for several months.

Besides, as women do not possess the power of altering, by any affection of the mind, the structure of any part of their own body, with which they have an immediate relation, it cannot be thought probable that they could have such an influence on the structure of a body, to which, it is now well known, their fluids are not even directly transmitted.

Flesh-marks originate from incidental injuries of the skin when the infant remains in the womb, and may be occasioned by its particular situation, and a variety of other circumstances.

Passions of the mind, which induce violent agitations of the body, during the early months, when the child is very delicate and tender, may cause such a mechanical derangement of its organs as to render it *monstrous*; hence it is only under those circumstances that a refusal to gratify longings can affect the infant.

SECTION VI.

Swelling and Pain in the Breasts.

FROM their great sympathy with the womb, the breasts in the early months of pregnancy often become swelled, and extremely painful. These symptoms are most distressing to women who are in great good health, and of a full habit of body.

In general such complaints require only that the breasts be kept quite loose, and covered with soft flannel or fur. Stays, therefore, if they are worn, should be carefully prevented from pressing on these parts.

When the swelling and pain occasion much uneasiness, a little fine warm olive-oil should be gently rubbed on them evening and morning, and afterwards the flannel must be applied. The belly is to be kept open, and if there be marks of general fulness, blood ought to be drawn from the arm.

Suppuration of the breasts during the latter months of pregnancy, always requires the most serious attention, for it has been sometimes found connected with a diseased state of the lungs, so that when the discharge from the breast has ceased, sudden imposthume of the lungs has followed. It is not easy to point out the marks by which these cases may be distinguished from the ordinary ones,

where the inflammation or festering of the breast is the effect of cold or inattention to the state of the general habit.

The practice must be varied according to circumstances: but it is certainly a good general rule to establish a free outlet for the matter, and to support the strength.

SECTION VII.

Of Palpitation of the Heart, and other Nervous Affections.

MANY women are liable to palpitation of the heart during the whole of pregnancy, others suffer from that complaint only during the latter months. It is a most distressing feeling, and on some occasions even puts on the appearance of extreme danger.

Where it attends the whole of pregnancy, it is to be attributed to that increased susceptibility of impression of the nervous system which has already been hinted at as the effect of impregnation, and it is to be treated as the other nervous symptoms occurring in that state.

But where it is confined to the latter months of pregnancy, it, in most instances, is the effect of disordered or irritated stomach, and can be relieved by no other means than emetics, laxatives, and ab-

stinence. Whatever article of diet can have the least tendency to load the stomach, must be scrupulously avoided, and, in particular, flatulency must be guarded against.

HYSTERICAL and **FAINTING** fits are apt to occur about the period of quickening, and though sometimes attended with alarming appearances, are in general slight, and of short duration. They can be very readily distinguished from convulsions, which, in the pregnant state, are the most dangerous maladies that occur.

The treatment of those nervous complaints must be varied according to the constitution and situation of the individual ; but, in general, invigorating diet, regular exercise in the open air, and attention to the state of the bowels, are found to render the attack less frequent. The immediate symptoms may be moderated by means of preparations of camphor or valerian.

Opiates have been often prescribed for such disorders, and, it must be admitted, not only afford almost instant relief, but also soothe the unpleasant feelings which often precede the attacks. Experience, however, has now convinced all those practitioners who have attentively considered the subject, that, in general, preparations of opium do considerable injury during pregnancy, by impeding the functions of the stomach and digestive organs, and by eventually increasing the tendency to nervous com-

plaints. It is unnecessary to remark, that fermented liquors are equally hurtful, and, in some respects, may be even more prejudicial.

SECTION VIII.

Of Preternatural Change of Position of the Womb.

A LITTLE before the womb rises out of the cavity of the basin, which happens some time between the third and the fourth month, as formerly mentioned, its position may be preternaturally changed. This constitutes a disease, called, in medical language, the *Retroverted Womb*, which, if not early attended to, is productive of very great danger; and hence a knowledge of its symptoms and causes must be an interesting and important object.

The first symptoms of the disease are, incapability of passing urine, with a sense of uneasy weight, occasioning pain and bearing-down at the back part of the basin, attended with frequent unnecessary calls to stool. By degrees the pain becomes so violent, as to induce strainings like those which occur during labour.

This, after a short time, becomes intolerable; the posterior part of the vagina is protruded in form of a tumor; and the calls to stool are very urgent, but are only productive of fatiguing fruitless efforts.

At last, fever, delirium, and convulsions, terminate the sufferings of the woman.

All these complaints are occasioned by the womb being turned out of its natural situation; for its bottom or upper part is pushed backward and downwards between the vagina and the straight gut, and its mouth is drawn upwards to the superior edge of the share-bones: this explains the uneasy sensation in the back part of the basin, the bearing-down pain, with the protrusion of the vagina, &c.

When the womb continues in this situation, the distention of the bladder, and the accumulation of the contents of the intestines, oppose its return to its natural situation.

This particular complaint can be distinguished from every other by the symptoms already enumerated, and by a bulky body, occupying nearly the whole cavity of the basin, being readily felt between the vagina and straight gut.

Violent exercise, or bearing down from exertions in consequence of laughing, crying, straining from retching, &c. when the bladder is full, at that time when the womb begins to rise out of the bones, are probably the causes of the preternatural change of position of that organ.

Unless proper advice be early had recourse to, the event of this disease is always uncertain. When the urine and contents of the intestines have been retained for a considerable time, along with bearing-down pains and protrusions of the vagina, the woman's life is in very great danger.

The cure in these cases depends on the womb being replaced in its natural situation, and being kept there till its increased bulk prevents the possibility of its again sinking down. This cannot be accomplished unless the urine be previously removed; but after this, if the disease have not continued for several days, the reduction can be easily effected by gentle means. It requires often the most dexterous management to draw off the water in such cases, in consequence of the altered position of the passage to the bladder. Bloodletting and opiates are in some cases necessary. The recurrence of the complaint can only be prevented by confinement to the horizontal posture, till the increased bulk of the womb makes it rise above the brim of the basin.

Women who, from particular circumstances, do not obey the calls of nature when they occur, are subject, about the fifteenth or sixteenth week of pregnancy, to a slight degree of this disease; for the bladder being connected with the womb at its front, when much distended, will readily push that part backwards, as it more easily yields to afford room for the increased bulk of the bladder than the coverings of the fore part of the belly do.

Although, in such cases, a disposition towards the preternatural change in the situation of the womb, already described, takes place, if the bladder be emptied by proper means, no disagreeable consequence will follow, provided the woman be kept quiet, and in the horizontal posture.

Within these few years, several eminent authors and practitioners, from having seen such cases, have adopted an idea respecting the nature and cure of the Preternatural Change of Position of the Womb, which inculcates a very dangerous practice.

They have alleged, that as the position of the womb can only be preternaturally changed by suppression of urine, if that can be removed no danger will ensue; and they have asserted that there is no necessity for attempting to reduce the displaced organ to its natural situation, because the gradual increase of its bulk will readily accomplish it.

Such opinions, it is evident, are founded on those cases where there is only a trifling change of position in the womb, from the distention of the bladder, as already explained. If such practitioners were called to visit a patient, who, along with suppression of urine, &c. had violent bearing down pains, with protrusion of the vagina, and if, on examination, they found a large hard swelling between the vagina and straight gut, their patient would soon be beyond the reach of art, if they were to content themselves with drawing off the water, and endeavouring to procure a discharge from the bowels. Were minute investigations consistent with the design of this work, it could be easily proved, from the writings of such practitioners, that they have not drawn a proper distinction between the *tendency* to, and real *existence* of, this disease; for they have

not even hinted at the symptoms above described as being characteristic marks of the complaint.

SECTION IX.

Of Costiveness and Piles.

MANY women disregard Costiveness, as it appears trifling, and in their opinion cannot be productive of much danger. The most unfortunate consequences, however, have often been occasioned by neglected costiveness.

The pressure of the womb on the contents of the belly may have some effect in producing this disease; but that, perhaps, is not the chief cause; for it is probable that, during the latter months of pregnancy, a larger proportion of blood than usual is prepared from the same quantity of food, and therefore the contents of the intestines are more coarse and solid, and do not excite the usual actions of the guts.

Pregnant women should never allow more than one day to pass without having their bowels cleaned. They may keep themselves regular in this respect, by the use of a considerable proportion of vegetables in their diet, and by taking occasionally a dose of any of the laxatives mentioned in the forms of medicine in the Appendix to this work.

When constipation for several days has taken

place, a practitioner should at once be applied to, for otherwise much hazard may be incurred. Thus, if instead of this, the woman herself take any ordinary laxative medicine, she may increase the danger of the disease; for the coarse and hardened contents of the intestines would either be expelled with great pain and much difficulty, or might be retained, while the bowels themselves would be violently irritated.

But when the assistance of a practitioner cannot be commanded, repeated glysters, composed of warm soap and water, with a large proportion of fine olive-oil, and without any salt or any irritating substance, so exhibited as to be retained for some time, are at first to be had recourse to; and after the third or fourth of these, some laxative, such as castor-oil, or an infusion of senna with manna, should be taken by the mouth. If these have not the effect of properly unloading the bowels within four hours from the time of being swallowed, the strong laxative glyster, directed in the Appendix, should be used.

It may be necessary to hint, that the *appearance* of *looseness* is in many instances occasioned by costiveness, and that unless the true cause be distinguished, irreparable mischief may be done. When women, while breeding, are troubled with looseness, they ought never to employ any means for suddenly stopping it, as an immediate overflow of blood to the womb may be the consequence. Indeed, it may be remarked, the utmost caution is required in every

case of looseness, before any attempts to stop the discharge from the bowels be adopted, because such discharges are sometimes the effects of an effort of the constitution to throw off some oppressive load, and sometimes they are the consequences, as already stated, of the irritation arising from the accumulation of acrid stools.

PILES are small livid tumors, of a bulbous shape, placed at the extremity of the straight gut, and generally productive of considerable pain. They are the common attendants of costiveness, though it is probable that some other circumstances contribute to induce the disease during the latter months of pregnancy.

The piles, when attended with no discharge, are named *blind*; and *bleeding*, when blood is poured out from them. They are divided into External and Internal, from their particular situation; for when the livid tumors are situated without the verge of the gut, they obtain the former name, and the latter when they do not appear externally.

External piles can be very readily distinguished; but it is often difficult to discover the existence of internal ones. When violent pain is felt at the lower part of the straight gut on going to stool, or on walking, and at no other time, there is much reason to suspect that there are internal piles. The blind piles are always most painful; the bleeding ones never prove troublesome, unless when attended with such a discharge as to weaken the body.

Piles, during pregnancy, cannot be completely cured, though the painful symptoms can be moderated by spare living, occasional bloodletting, and an open state of the belly.

When the swelling from piles is considerable, the application of any astringent substance, such as an ointment prepared of two parts of Goulard's cerate, and one of powdered galls, will be found useful.

If, along with great swelling, there be violent throbbing pain, attended with feverish symptoms, &c. leeches should be applied to the part, and afterwards fomentations, to encourage the bleeding. Sitting over the steams of warm water has been recommended in such cases; but it ought to be used cautiously, as it has frequently been productive of very bad effects.

Bleeding piles require no particular management, except attention to the state of the belly, unless the discharge from them be profuse, which it seldom is during pregnancy. At that period it may generally, perhaps, be considered as a critical evacuation.

Sulphur, mixed with an equal proportion of cream of tartar, though an old-fashioned remedy, has been found very useful in every case of piles. The good effects of this medicine are not to be attributed to any specific quality, but merely to its acting as a gentle laxative.

The principal inconvenience arising from this complaint is, that the patient cannot take that exercise which her situation in other respects might



require ; for the piles are always much relieved by rest in the horizontal posture.—It is to be remarked, that the preceding observations apply to piles in the state of pregnancy. Where they occur independent of that state, more active and efficient measures are often necessary.

SECTION X.

Of Swellings of the Lower Extremities, and Pains in the Back, Belly, and Loins, &c.

SWELLING of the feet toward night is a very common occurrence during the latter months of pregnancy. It is the effect of the enlarged womb preventing the ready return of the fluids from the lower extremities. But when the swelling extends above the knees, and more especially when it appears on the upper parts of the body, and where it does not entirely subside after having been a few hours in bed, it is to be regarded as a very serious complaint.

In the slight degrees, which happen chiefly during a first pregnancy, or when the womb seems much distended, or when the woman is rather relaxed, the occasional horizontal posture, when the swelling is troublesome, with spare diet and an open state of the bowels, are all that seem necessary. The more serious cases of this complaint require

bloodletting to a pretty considerable extent, and repeated purgatives. In some cases, where this practice has not been pursued in proper time, nothing else than premature delivery has saved the patient.

Sometimes swellings of the lower limbs during pregnancy, are the effects of a debilitated state of the system, and are, of course, connected with a dropsical habit. Such cases may be very readily distinguished from the former, by the slightest attention to the symptoms.

PAINS IN THE BACK, BELLY AND LOINS,—are very common complaints in the last months of pregnancy. They proceed from a variety of causes, as the change of situation of the womb, its pressure on the neighbouring parts, &c. and they require a variety of treatment suited to the circumstances of the case. When these pains are slight, change of posture, and attention to diet and to the state of the belly, are alone requisite; but where they are very violent, recourse ought to be had to the advice of a practitioner, as small bleedings, opiates, &c. may be useful or necessary.

SECTION XI.

Coughs, Breathlessness, and Cramps in the Limbs.

COUGH AND BREATHLESSNESS.—The belly is divided from the chest by a fleshy partition, which

is capable of increasing or diminishing the cavity of either. When the womb rises very high, it presses on this partition, so that a proper space is not allowed for the free expansion of the lungs. From this circumstance breathlessness is occasioned; and as the blood is thus prevented from passing freely through the lungs, an irritation is produced, which excites cough.

These complaints cannot be removed till the size of the womb be diminished; and, therefore, no permanent relief is to be expected till after delivery. But when they prove very troublesome, they may be relieved by occasional bloodletting, an open belly, and a proper posture when in bed, viz. half-sitting and half-lying. Blisters, which are often recommended, can only be productive of temporary good effects; and as they are occasionally the source of much irritation of the bladder, they ought seldom to be employed.

CRAMPS.—Women near the end of pregnancy are subject to cramps in the legs, thighs, &c. which occur most frequently when lying in bed. They are occasioned by the pressure of the womb; and, therefore, like the other complaints depending upon the same cause, they do not entirely cease till after delivery.

When the disagreeable sensation arising from cramps is very painful, rubbing with dry flannel or a flesh-brush, or the application of Anodyne or Opo-

celandic balsam, or Æther, to the affected parts, are the best modes of procuring relief. Opiates, where the belly is loose, may also be had recourse to occasionally. In slight cramps, change of posture affords almost immediate relief. In some cases blood-letting is required, to moderate the violence or the frequency of cramps.

SECTION XII.

Jaundice, Colic Pains, and Affections of the Urine.

JAUNDICE, during the latter months of pregnancy, appears generally in a slight degree, being unaccompanied by pain in the side or much oppression, and the yellowness of the skin being not of a deep tinge. But in some instances, violent pain in the side, and excessive sickness and retching, attend, and the colour of the skin soon becomes of a very deep yellow. It is only under these latter circumstances that the complaint is at all distressing.

The former of these degrees of jaundice seems to be owing rather to an accumulation of bile than to any obstruction, and it yields readily to the use of a gentle emetic, (viz. twenty grains of ipecacuanha), followed by any brisk laxative medicine. Where women have the resolution to swallow a raw egg every morning, fasting, after the disease has been

removed, they may be assured of thereby preventing its return.

The latter, or the more violent degree of jaundice, is occasioned by the formation of gall-stones, and the obstruction which one or more of these bodies oppose to the regular passage of the bile. The means most conducive to relieve this degree of the complaint, are bloodletting, warm fomentations to the pained part, and large doses of opium, with such laxatives as shall counteract the effects of the opiates. If any medicine by which the formation of gall-stones could be prevented, or by which those substances might be dissolved while in the gall-bladder, were discovered, it would be a very important addition to the means of alleviating human disease ; for the most alarming fits of cramp in the stomach, or of pain with deadly sickness over almost the whole belly, are often produced by this cause ; and during pregnancy such symptoms are more especially alarming.

COLIC PAINS.—Towards the latter end of pregnancy, colic pains are often so severe as to resemble the throes of labour. They arise from several causes, such as, disordered bowels, pressure of the womb, irregularities in the diet, &c.—If they be not preceded by, nor attended with, costiveness, they may be easily remedied by opiates, and a proper regulation of diet.

But if, along with these pains, the individual be costive, or has lately been so, a practitioner should at once be consulted, otherwise, by improper treatment, or from the circumstances of the complaint not being accurately understood, the greatest danger may be apprehended; for sometimes, as has been already observed, there is an appearance of looseness which originates merely from the drinks that are taken being tinged with the contents of the intestines in their passage through them.

RETENTION, DIFFICULTY, OR INCONTINENCE OF URINE.—These complaints generally trouble women near the term of delivery. As they proceed from the pressure of the womb, they cannot be expected to be removed till the womb be emptied of its contents.

Retention of urine is always to be considered as a complaint which may be productive of the worst consequences, if neglected; for besides laying the foundation for future disorders, if labour should come on during it, the bladder might be irreparably injured. Recourse should be had, therefore, in all such cases, to the advice of a practitioner. Difficulty in making water may, in some cases, be removed by change of posture, or by gentle pressure on the womb, by means of a suitable belt or roller.

Incontinence of urine is a most disagreeable com-

plaint, as it keeps the patient always in a very uncomfortable state. It can only be moderated by frequent horizontal posture ; and its bad effects may be prevented by the most scrupulous attention to cleanliness, and the use of a thick compress of linen, or a proper sponge.

SECTION XIII.

Convulsions during Pregnancy.

CONVULSIONS during pregnancy may be dreaded, if the woman complain of violent excruciating pain in the head, or crampish pain in the stomach, attended with deadly sickness ; or if she have considerable swelling of the face and upper parts of the body when in the erect posture. If these circumstances be disregarded, the fit takes place. The whole body and limbs are violently agitated ; the face is commonly flushed, or even livid ; the tongue is every now and then forcibly protruded and retracted with a kind of hisping noise ; and a little bloody froth works out at the mouth. The duration of the fit is very various, in some cases not exceeding a minute, and in others extending to half an hour, or even to a longer time. While it lasts, the woman is quite insensible ; and if the sensibility return when the fit ceases, she is perfectly unconscious of what had happened. In many cases, how-

ever, stupor with snorting breathing follows the fit, from which she is only roused by another convulsion. On some occasions the fits tend to promote labour, and in the treatment, it is a matter of the first importance to be able to determine when they do so.

Hysterical fits sometimes imitate convulsions in some of the prominent characters, insomuch that there is only one invariable mark of distinction, which the inexperienced can depend upon, viz. the state of sensibility. However violent hysterical fits may be, the woman can be roused, or made, for the time at least, to hear, and even to obey; for example, to swallow drink or medicine; but during a true convulsion, no effort can make any impression on the mind of the patient.

Under proper and active management, convulsions are found to be in general more alarming than really dangerous. The frightful appearances which attend such cases, having paralyzed the exertions of practitioners, may, perhaps, account for the unfortunate event in many instances.

A knowledge of the causes of convulsions cannot be too widely diffused, as their occurrence may, in more than the majority of cases, be prevented.—The formation of too large a quantity of blood, and an increased susceptibility of impression of the nervous system, occasion the tendency to this disease. When these exist in any considerable degree, circumstances suddenly bring on the fits, which, in any other condition of the body, have little influence,

such as over-fatigue, fright, distress of mind, irritations of the stomach or bowels, over-distention of the urinary bladder, or obstruction to the passage of the blood through the belly and lower extremities, in consequence of the pressure of the enlarged womb. The immediate cause of the fits is an overflow, or too great a determination of blood to the vessels within the head.

These facts explain the necessity for so regulating the diet and exercise during the latter months of pregnancy, as shall prevent both too great fulness of the habit, and also impaired energy of the nervous system.

The prevention of convulsions, when the threatening symptoms of their approach are observed, depends chiefly on an unusually large quantity of blood being drawn from a vein.—When the fits have actually occurred, besides this, which is to precede every other means, the exciting cause is to be removed; and if there be any effort towards expelling the infant, that is to be promoted. A considerable variety of treatment must therefore be required in different cases. The precaution of separating the jaws by a plug during the fit, in order to save the tongue from injury, is indispensable in every instance. Whenever the patient is capable of swallowing, preparations of camphor may be given with great advantage. Opium, in every form or dose, has invariably proved prejudicial.

SECTION XIV.

Discharge of Blood from the Womb during Pregnancy.

It has been already mentioned (p. 72.), that in the natural state of pregnancy, no discharge of blood can take place from the womb ; and that it is a most erroneous idea, that women are sometimes *regular* during the early months. Every appearance of blood, therefore, in the pregnant state, ought to be considered as a certain indication that something uncommon has happened.

The discharge may proceed either from the womb, or from the passage leading to it. In the former case the consequences may be serious, but in the latter there is not often much hazard.

When a little blood comes away, after walking or standing for a considerable time, attended with a trifling pain at the lower part of the belly, without any symptoms of fever, or of increased action of the bloodvessels, and without any accident having occasioned violent agitation of the body, it may be supposed to proceed from the passage to the womb, and may easily be remedied by confinement for a short time to the horizontal posture, and afterwards avoiding much walking or long continued erect position of the body.

But if the appearance of blood be preceded by, or

accompanied with, flushings of the face, and heat in the palms of the hands, with much thirst ; or if pains of the back, loins, or lower part of the belly occur at the same time ; it may be suspected to originate from the womb itself.

Such symptoms, in the early months of pregnancy, seldom endanger the patient's life, unless she have been in a previous state of bad health, provided she be under proper care, though it is more than probable that the child will be destroyed, and miscarriage induced. In the latter months, on the contrary, the life of the patient is always in jeopardy, until the discharge be entirely stopped or moderated.

The immediate cause of a discharge of blood from the womb, during pregnancy, is the rupture of bloodvessels, by the partial or total separation of those parts which connect the child with the mother. This circumstance explains the difference of danger in the early and in latter months ; for in the former, the bloodvessels of the womb being small, are incapable of pouring out much blood ; but in the latter, they are very large, and may discharge, in a short time, a great quantity.

Every circumstance which can increase the circulation of the blood in the early months, and, at all times of pregnancy, every accident which can injure the womb, may readily affect the connection between the mother and child ; such are violent agitation of the body, blows on the belly or back, or irritation from any of the neighbouring parts communicated to the womb.

Another cause of this accident, quite different from any other, and attended with much more danger, is the unusual place of attachment of the after-birth. This substance, though not fixed invariably to any particular part of the womb, is most commonly attached to its upper part called the Bottom. By this provision, two important purposes are served ; for, first, the changes in the shape and size of the womb do not interfere with the enlargement of the after-birth ; and, secondly, when the term of pregnancy is completed, the infant is thrown off before the cake be separated. But when the after-birth is attached to the neck or mouth of the womb, (happily a rare occurrence), the expansion of those parts that must precede the birth of the infant cannot be affected without a partial separation of the cake ; and that necessarily occasions a discharge of blood, which is more or less considerable, according to the extent of the after-birth that is separated.

The evidence of this cause of flooding is the occurrence of a discharge about the time at which the neck of the womb begins to be expanded, viz. the seventh month, while the patient had not been exposed to any accidental cause of the separation of the after-birth. The discharge of blood thus induced, is liable to recur from the most trifling exertions, as surprise, coughing, laughing, &c., till the patient be delivered ; and if the symptoms be not watched, and the case treated with the utmost care, the event may be fatal.

The management in those cases must be varied according to a number of circumstances. Tranquillity of mind and rest of body are proper in every case. Confinement to bed, therefore, and seclusion from company, should always be advised. It is also of great importance that the patient be kept cool; for which purpose an airy bedroom should be chosen, few bed-clothes ought to be allowed, and the drinks, &c. must be almost quite cold. Bloodletting and opiates are remedies which on many occasions produce the happiest effects, though they are not admissible in every case. The application of cold wet cloths to the lower part of the belly is sometimes employed with success, especially in the early months. Officious attendants are led, from the languor of the patient, to exhibit spirits or wine as necessary cordials; but such means generally hurry the action of the blood-vessels, and hence promote and increase the discharge, and should therefore be strictly prohibited.

In every case of this kind, even though the discharge be stopped by the above management, an experienced practitioner should be called, as the health of the patient may be materially impaired, or even her life endangered, by the slightest neglect, and as the loss of the child is a common consequence of such symptoms. Where the after-birth is situated over the neck of the womb, the danger is so great, that a few minutes delay may prove fatal to mother and infant. This cause cannot be ascer-

tained by any other than a practitioner ; and although sometimes it is possible to palliate the alarming symptoms, till the strength of the infant be such as to afford reason for expecting that its life may be preserved, nothing else than a forced delivery can give a chance for saving the parent.

SECTION XV.

Abortion.

By Abortion or Miscarriage, is meant the expulsion of the infant at any period when it cannot live ; it must therefore happen at some time before the end of the seventh month.

It has been a very prevalent opinion, that no other than women in the higher ranks of life are subject to miscarriage, except when the body is violently affected by some external accident. But this is a mistake ; for women in the lower ranks are as often liable to abortion as those in the higher spheres, if they inhabit large cities. The regularity of living, and the other advantages enjoyed in the country, render that accident less frequent there among women of every description. When the many irregularities in the mode of living, the impure air, &c. to which those who inhabit cities of any extent must necessarily be exposed, are considered, it will appear extraordinary that miscarriage

does not happen much more often than it really does.

The symptoms of abortion are various. As they do not appear in the same succession in every case, they cannot be detailed with precision.—The sudden cessation of the breeding symptoms before the period of quickening, together with a sense of weight and coldness in the lower part of the belly, or the same sensation at any time after quickening, with flaccidity of the breasts, may be considered as sure symptoms of future miscarriage.—Pains in the back, loins, and lower part of the belly, bearing down with regular intermissions, and discharge of blood from the womb, are indications of threatening abortion.—But sometimes miscarriage happens without any previous cessation of the morning sickness or flaccidity of the breasts, and does not take place where violent pains with loss of blood have occurred.

Some women have a certain tendency to miscarry, which renders the most trifling accident productive of that misfortune, while others suffer the most astonishing agitations of the mind and body, without the same bad consequence. Women have this tendency in different degrees, and are therefore liable to miscarriage in the same proportion. But those who have formerly miscarried, are very liable to a repetition of a similar accident.

This tendency may depend on weakness, or irritability of the general habit, or of the womb itself,

on a disposition to fulness, or on some defect in the womb, which may prevent it from increasing equally in size, according to the period of pregnancy. Whenever this tendency to abortion takes place, every circumstance which can affect the womb immediately, or through the intervention of other parts, will readily produce miscarriage. Such are, fatigue from long walking or dancing, straining from coughing, or from efforts at stool in consequence of colic-pains or severe looseness, violent agitation of the body, sudden passions of the mind, as excessive fear or joy, surprise, &c. exposure in a heated room, tight lacing, and a great variety of other circumstances. The death of the infant, which may happen at any period of pregnancy, and from many causes, or a diseased state of its appendages, inevitably occasion miscarriage, independent of every other circumstance.

The immediate cause of abortion is the separation of the connections between the mother and the infant, together with contraction of the womb.

Miscarriage, in every case, is attended with serious consequences ; for, by laying the foundation for the repetition of the same accident, it may render the woman incapable of being the mother of a living child, and it may injure irreparably her general health. In the early months of pregnancy, it is seldom productive of any immediate danger, provided proper assistance be called ; but after the fifth month, the life of the patient is always in a

precarious situation, till the womb be entirely emptied of its contents.

In every case, the event may be judged of by attending to the nature of the symptoms, and of the causes which induce the accident. The former of these have already been explained. With respect to the latter, where the cause is discovered to proceed from the death of the infant, or from such a state of the mother's body that the womb cannot retain the child, such as great irritability or weakness of the general system, or of the womb itself, or irritation communicated from the parts contiguous to it, the threatening event cannot be prevented. When fulness, or any violent passion of the mind, is found to be the cause, if the bearing-down pains have not come on, the woman may, by proper management, be yet enabled to carry the child to the full time.

It is of importance also to remark, that in some rare cases, where abortion is threatened from these causes, if *twins* or *triplets* have been conceived, one embryo may be expelled, and the other retained.

Such cases suggest a caution, which should never be neglected, that after miscarriage every patient should be treated for some time as if she were actually still pregnant, in order to prevent the possibility of a second infant being lost, especially as the actions of the womb, when once excited, are very readily renewed by the most apparently trifling irritation.

One cause of abortion is generally attended with more serious consequences even than the loss of the child, for it most commonly occasions the death of the mother; that is, where *artificial* means have been employed to induce miscarriage.

Various artifices have been occasionally had recourse to by unmarried women who have become pregnant, to procure the expulsion of the infant, before it have acquired any considerable size. But unless such means produce violent effects on the parts contiguous to the womb, they do not excite abortion. Where they so act upon the parts in question, the inflammation which they occasion commonly proves fatal to the mother.

The treatment, in cases of miscarriage, must be regulated by a great variety of circumstances, particularly by the nature of the symptoms and causes, and by the constitution of the patient. As the future health and happiness of the woman must often depend on the proper management of such cases, recourse should always be had to proper advice.

For the benefit of those who may not be able to procure immediate assistance, from the situation of their residence, &c. the following general rules are given; but it is inconsistent with the plan of this work, to enter minutely into the detail of such circumstances as require a knowledge of the practice of medicine, or, from their importance and intricacy, should be referred to medical practitioners.

When there is an appearance of blood, (in consequence of any of the accidents already fully explained), which threatens miscarriage, the patient should be put to bed and kept quiet and cool ; and if she be of a full habit, or have symptoms of fever, she ought to have blood drawn from the arm to the extent of from one to two tea cupsful. If regular bearing-down pains do not succeed the discharge, and no bulky nor skinny-like substance, nor large clots of blood be expelled, there is reason to hope, that by such means miscarriage may be prevented. But if, along with the discharge of blood, large clots come off, attended with bearing-down, or pains in the back and loins, especially if the symptoms which precede abortion have appeared, there must be every probability that the threatening event cannot be obviated. In these cases, every bulky substance which is passed should be kept in a basin of water, that the exclusion of the child and its appendages may be ascertained.

Very often the embryo alone is at first expelled, and violent pains still continue, attended with a trifling discharge of blood. The occasional exhibition of a simple *lavement*, consisting of warm-water and a little oil, will commonly moderate the pain, and promote the expulsion of the appendages of the infant ; for, till this latter circumstance takes place, the patient cannot be completely relieved. But when, under such circumstances, the

discharge of blood is considerable, the patient can only be effectually relieved by the retained portion of the conception being extracted by means of art. Till that can be accomplished, cloths dipped in cold water, or cold water mixed with half as much vinegar, may be applied to the lower part of the belly. When the infant and its appendages have come off, opiates may be given with advantage. After miscarriage, the belly should, in every case, be moderately compressed by means of a roller.

If the accident have happened in the early months, the patient should remain in bed for four or five or six days, according to circumstances. On the second or third day she is to begin to take small doses of bark and vitriolic acid, or some preparation of myrrh and steel, or other tonic medicine; and after she has in some measure recovered her strength, and all discharge has ceased, she ought to dash cold water evening and morning on the lower part of the belly. —The treatment after miscarriage in the latter months, should be nearly the same as after delivery at the full time.

Great variety of treatment is required to prevent abortion in subsequent pregnancies, wherever it has once happened; but the many circumstances which tend to induce miscarriage, render it difficult to include directions, for every case that can occur, under general heads. In this work such a task would be impossible. It may be truly said, that the advice of even the most skilful practitioner is sometimes inadequate

to the prevention of miscarriage, where the habit has become established ; and, indeed, nothing distinguishes the abilities of a practitioner so much as his success in cases of abortion.

Whenever any individual has once miscarried, she should, when again pregnant, be particularly cautious about the period at which she had formerly been unfortunate. In the majority of cases, there is a greater disposition to miscarry from the eighth to the twelfth week than at any other time ; and, therefore, those who have this tendency ought to be confined very much to bed for a few days before and after that period. Cold bathing, particularly by means of the shower bath, occasional bloodletting, a very open state of the bowels, and certain restrictions in diet, with a variety of other means, have often great effect in preventing abortion ; but as these can only be beneficial according to the circumstances of the case, and as their use may be sometimes highly improper, neither the cold bath nor bloodletting ought ever to be advised without the concurrence of a practitioner.

Those who have repeatedly miscarried about the fifth or sixth month, and had felt, previous to that accident, the symptoms of the infant's death, formerly described, have reason to dread, especially if the infant when expelled appear putrid, some latent poison lurking in their constitution, which can be removed by no other medicines than preparations of mercury.

CHAPTER III.

OF LABOUR.

LABOUR generally happens about nine calendar months, that is from thirty-nine to forty weeks, or from two hundred and seventy-three to two hundred and eighty days after conception. But, in some cases, this time is considerably shortened, and, in others, it is certainly protracted. On this latter point, indeed, there have been many controversies among lawyers and medical men. Every practitioner of extensive experience, who has attended carefully to the subject, must, however, be satisfied of the general fact, although it would not be easy to determine the precise period to which pregnancy may be extended. Women have been known to pass the eleventh menstrual period by some days, but no well-authenticated instance has occurred, where the twelfth period has actually been exceeded.

There are two methods of reckoning, viz. from the time that obstruction takes place, and from the sensation of quickening. If the former be depended on, the date of conception should be taken at a fortnight before the obstruction. If the latter be preferred, five calendar months may be allowed from

the time that the movement of the infant was distinctly perceived.

It is well known, that the process of delivery is not uniformly the same in every instance. This has led practitioners to divide labours into four kinds, viz. Natural, Laborious, Preternatural, and Complex. In ninety-seven or ninety-eight out of the hundred cases of labour, the whole process is completed with safety, both to mother and child, within twenty-four hours from the commencement, the head of the child being forced foremost. This fact has led many speculative persons to allege, that no skill is required in conducting delivery; and the ease and safety with which the females of the brute creation bring forth their young, have been triumphantly cited as an incontrovertible evidence in favour of the opinion, although the most inattentive observer can scarcely overlook, that there is a most material difference between the structure of quadrupeds and that of the human body.—It may with great propriety be asserted, that on the proper management of labour the event must often depend; for in many instances a delivery that ought to have been quite natural, may become difficult or dangerous, not only from improper interference, but also from omitting those means by which the obstacles to the birth of the child, natural or acquired, may be counteracted. On this account, in the following section a particular description of the method of managing natural labour is given.

SECTION I.

Natural Labour.

THE sufferings of a woman during child-bearing have been compared to the fatigues of a person on a journey; and this has led practitioners to divide the parts of a labour into three stages. The *first* stage consists of the opening of the mouth of the womb, and of the sac or bladder which includes the infant; the *second*, of the actual passage of the child, and its separation from the mother; and the *third*, of the exclusion of the after-birth, &c. All these several effects are produced chiefly by one simple cause, the contraction of the womb. By this process, that part, after forcing out the infant, from being the large pouch already described, gradually shrinks into a thick round body, the cavity of which is not capable of containing more than an ordinary hen's egg.

1. *Of the Circumstances which happen during Labour.*

PAINS in the back and loins, occurring at irregular intervals, and inducing many disagreeable sensations, are commonly the first signs of labour. These are occasioned by the incipient contractions

of the womb ; they serve the valuable purpose of gradually opening the orifice of that part, which, it was formerly remarked, becomes closed up from a short time after conception. In most cases the effect of those contractions is to force off a slimy matter, tinged with blood, called *the shews*.

After these symptoms have continued for some time, considerable uneasiness in most instances follows, frequent warm and cold fits, with urgent desire to make water, &c. take place, and the patient becomes exceedingly restless, as every situation appears uncomfortable to her. By degrees the pains increase in frequency and force ; they occur at regular intervals of ten or twelve minutes, and do not then occasion the continued uneasiness which is felt at first, the woman being tolerably easy when they are off.

These are the marks by which individuals may judge themselves to be in labour ; but as spurious pains often take place in the latter months of pregnancy, the mode of distinguishing them from the true labour-pains should be known, as otherwise the patient may be kept for several days in a state of anxiety and distress.

Spurious pains happen most commonly towards the evening, and are most troublesome during the night ; they are more trifling and irregular than true pains ; and as they produce no change on the orifice of the womb, the true shews do not succeed them. But the circumstance which chiefly

distinguishes them is, that they become less frequent and less powerful on getting out of bed, or other change of posture. They are occasioned by the pressure of the womb upon the parts which surround it, or by costiveness. In the former case, they may be removed by change of posture and opiates; and, in the latter, they can only be obviated by the costive state of the belly being remedied.

Occasionally a discharge, which somewhat resembles that produced by true pains, attends spurious ones; and hence, in some cases, spurious may be mistaken for true pains, even by practitioners. From this mistake, women have been supposed to have been for several days in labour, when, in fact, that process had not commenced.

When the first stage is pretty well advanced, the pains generally recur with great regularity every five or six minutes, or even oftener; the contractions of the womb push forward the lower part of the membranous sac in which the child is contained, with a little of the water, like a small bladder; and this being insinuated between the edges of the orifice of the womb, gradually forces them asunder, and, increasing in size in proportion as they are separated, continues to open that orifice, and the superior part of the vagina, till these parts are sufficiently enlarged to admit of the entrance of the infant's head. In this way, those delicate and acutely sensible parts, are not exposed to the injuries which would ensue from their being suddenly forced open.

After the passages are sufficiently prepared, the membranous bag bursts, and the waters are discharged, and this is usually followed by an increased violence of the pains.

When this stage proceeds favourably, it is commonly completed within from twelve to fourteen hours from its actual commencement ; but occasionally cases occur, where it would be protracted for a very long time, if it were trusted entirely to the natural powers. It is of the utmost importance to distinguish such cases, for it is a fact which might be illustrated by many examples, some of them of the highest possible interest, that wherever this stage is not completed within fourteen hours, the subsequent parts of the labour are rendered dangerous, both to mother and child.

Second Stage.—In natural labours, the head of the infant advances foremost, and is so placed as to take up the least possible room. The necessity for this arises from the shape of the head, and of the openings through which it has to pass, for both being oval, it is evident, that unless the larger part of the one be applied to the wider part of the other, the infant could not be expelled. In the greater number of instances, the apertures are not so accurately defined as to prohibit the passage of a child a little larger than usual, but a very slight increase of size adds more than can be imagined to the sufferings of the woman. This explains why the same

individual sometimes has a very easy, and sometimes a very difficult time ; it must vary according to the shape and size and compressibility of the head of the infant, independent of the deviations in its position, which sometimes occur.

The second stage, like the first, is accomplished by the mere contractions of the womb. These push forward the infant, who, if alive, is thrown for the time into a profound sleep, by which its struggles neither disturb nor injure the mother.

According to the force of the pains, the size of the infant, and the depth and width and dilatibility of the passages, is the duration of this stage. In some cases, soon after the water is discharged, there is an almost uninterrupted succession of bearing-down pains till the birth of the infant, and the whole process is completed within from a few minutes to half an hour. In other cases, the pains recur at distinct intervals, increase gradually in force, and advance the infant in the slowest possible manner, so that hours elapse, after the head had entered the bones, before the woman be relieved. Unless where the infant is very large, this stage is seldom much protracted in those who have formerly had a child.

Third Stage.—After the patient has rested for some time, she again feels pains, which are occasioned by the womb renewing its contractions. Such pains are termed *grinding*, from their being

much less violent than those by which the expulsion of the child was accomplished. When these contractions have continued for a certain time, the after-birth, &c. is separated, and then thrown off, and the womb becomes through its whole substance thickened and contracted. The orifices of those large bloodvessels on its internal surface, which had been ruptured by the separation of the after-birth, are thus drawn in and closed, and consequently the discharge of blood, that might otherwise prove the source of the greatest danger, is prevented.

If the former stages have been properly conducted, these efforts to separate and to expel the after-birth take place within a short time after the infant is born; but occasionally there are natural obstacles to this, which require the most serious attention. It is an invariable rule with all prudent practitioners, not only never to leave the woman till she be completely delivered, but also never to allow above an hour after the birth of the infant to elapse before the secundines are extracted. Many most deplorable cases have occurred, in consequence of the neglect of this rule. In some rare cases it is even necessary to interfere very soon after the expulsion of the child.

2. *Of the Assistance necessary during Natural Labour.*

First Stage.—If the woman be impressed with much apprehension at the beginning of labour, (which, if indulged, might be productive of very bad effects), it is useful that a cheerful friend or two should be present, in order to inspire her with spirits and courage; but, in general, the practitioner and nurse are the only attendants necessary.

As long as the contractions of the womb tend only to prepare the passages, no assistance is usually necessary. The woman should be kept quiet and cool, though she ought not to be confined to one posture. Violent agitations of the body are to be avoided, that the waters may not be discharged prematurely. For these reasons, the frequent interference of a practitioner in the beginning of labour, except where there is some uncommon resistance to the opening of the womb, or where the water has drained off too early, might do much harm, and could be attended with no good effects. At that period, no medicine nor other expedient for increasing the force of the pains, should be prescribed, as the more slowly the passages are enlarged, the less injury will the patient suffer. But if the bowels be not naturally sufficiently cleared, an emollient lavement may be administered.

Heating drinks, by way of cordials, are never to

be prescribed at the beginning of labour. They increase the tendency to fever which women have at that time, and the temporary vigour they induce is soon followed by a great degree of languor, that retards the delivery.

Retching and vomiting frequently occur during the first hours of labour. No danger, however, is to be apprehended from those complaints, if the patient have had no previous disease. On the contrary, the vomiting often accelerates the delivery. If, under these circumstances, there be evident marks of a disordered stomach, green tea, or an infusion of chamomile flowers, with a few drops of spirit of hartshorn, should be drank. Where the vomiting becomes excessive, or is long continued, bloodletting is sometimes required, but more often small doses of opium, in a solid form, repeated at suitable intervals.

When the first stage has actually commenced, the bed on which the patient is to be delivered requires a little preparation, that it may not remain wet and disagreeable after the delivery. As nurse-keepers, generally, are very well acquainted with the proper make of the bed, the following directions for that purpose, are intended for occasions where such women are not to be had.

The bed ought to be placed in such a situation that the room may be properly ventilated without the patient being exposed to a current of air; if practicable, it is to be kept at a little distance from

the wall. The bed-curtains should be made of thin materials, such as cotton or linen; they ought to be quite clean, and should never be completely drawn round the bed, otherwise neither can fresh air be admitted, nor the foul air be allowed to escape.

A hair-mattress is to be put above the feather-bed, and over it one or more dressed sheep-skins, or a piece of oiled cloth, and above this the ordinary binding blanket is to be spread; a clean sheet should then be laid on in the ordinary way, and another, in the form of a roller, across the bed, having the ends folded in at the sides. A coarse blanket, folded within a sheet, in the form of a table-napkin, ought to be laid immediately beneath the patient, and should be removed after delivery. The upper sheet, blankets, and outer covering, are to be put on in the ordinary way, except that the edge of the sheet, at the side of the bed to which the patient's back is to be placed, is to be pinned or sewed over the blankets and coverlet. The pillows ought to be so arranged, that the practitioner can sit behind his patient while she lies on her left side.

By adopting these directions, exposure to cold during labour will be avoided; and the patient may be left comfortable after delivery, without being much disturbed, while all the necessary assistance can be given without inconvenience.—The dress of women in labour ought to be as light and simple as possible, that it may neither overheat themselves nor embarrass the practitioner.

Second Stage.—The patient ought not to be put to bed till the first stage be nearly completed, and then she is to be placed on her left side, with a folded pillow between her knees.

Both when the infant begins to pass through the basin, and also during the first stage, shivering fits are apt to supervene. These generally announce an expeditious delivery, and are to be considered dangerous, in those cases only, where the state of the former health has been bad.

The bearing-down pains, by which the infant is forced through the passage, ought to be the effort of nature alone, and should not be assisted by the exertions of the mother; for in that event, either the delivery might be hurried on before the passages be sufficiently prepared, or the patient might be so much worn out, that she could not undergo the necessary fatigue that attends the complete expulsion of the child.

This important caution cannot be too strongly inculcated.—Inattention to it, and the impatience which sometimes women in such situations cannot perhaps avoid, often make a labour difficult and painful, that would otherwise have been natural and easy. Voluntary bearing-down must be particularly guarded against at the time when the head of the infant is on the point of being born; for if the delivery be then hastened, much injury may ensue.—The utmost attention of the practitioner is indispensably necessary, to prevent the accidents which

are apt to happen at that time, in every case where, from the acute feelings of the patient, violent bearing-down at that moment cannot be resisted.

After the head is excluded, the temporary relief experienced ought not to be interrupted ; and therefore the person of the infant is not to be immediately pulled out with force, as is often done ; for, besides the injuries which may be occasioned by not allowing the patient a little rest, the extraction of the after-birth will be thereby rendered difficult. In general, two or three minutes may be allowed to elapse before the body be drawn forward.

The infant should not be separated from the mother till the navel-string be properly tied, that no blood may issue from the divided vessels. Unless, however, it have shewn evident symptoms of life, it is not to be disengaged till proper means be employed for its recovery, except under particular circumstances.

Third Stage.—Before the after-birth be excluded, it is necessary to ascertain if there be any other infant in the womb. The marks by which the presence of twins, triplets, &c. may be distinguished, are to be described in a subsequent section.

In assisting the expulsion of the after-birth, unless the practitioner wait for the contraction of the womb, that part may be turned inside out. It is of the utmost importance that this be impressed on the minds of all those who happen to be out of reach

of regular assistance ; for the patient's life, after an easy labour, may be destroyed by the rashness of an ignorant practitioner. By understanding this cause of danger, those who are prevented from being under the care of persons of skill, may be enabled to counteract the effects of ignorance, and may thereby escape those hazards to which they might otherwise be exposed.

The after-birth is generally fixed, as already mentioned, to the upper part of the womb, which, at the time of delivery, is placed almost as high as the stomach ; and as all that part (of the womb) which extends above the bones of the basin is loose and yielding, if the navel-string be violently pulled before the after-birth be separated, the part thus unattached must be turned inside out,—the ordinary consequence of which is fatal.

No assistance nor interference ought therefore to be attempted till grinding pains occur, which mark the contraction of the womb, and then the practitioner is to assist by pulling gently by the navel-string during a pain, endeavouring to bring the after-birth through the basin, so that its progress may not be interrupted by any of the neighbouring parts.

While the assistance thus described is given, the patient should bear down moderately ; avoiding all violent exertions ; for by coughing, sneezing, &c. dangerous symptoms might be induced. The contractions of the womb, when slow, may be assisted, by gently rubbing the belly with the hand. Sti-

mulating medicines, or *lavemens*, for this purpose, are never to be employed, except by the advice of practitioners.

The secundines are to be extracted artificially whenever the efforts of nature do not tend to disengage them within an hour after the birth of the infant; and if flooding take place, or even threaten, there ought not to be a moment's delay in proceeding to that operation.—This, in many cases, is accomplished with such difficulty, and, in every instance, is a matter of such delicacy, that unless where no other aid can be procured, the midwife should never venture to perform it.

SECTION II.

Laborious Labour.

WHEN the delivery is not completed within twenty-four hours from its real commencement, though the head of the infant be forced foremost, it is styled *laborious*. In some cases the woman is at last delivered with safety by the natural efforts; in others it becomes necessary to draw forward the infant by means of an instrument, which can be employed without injury to the mother or to it; and, now and then, on some most distressing occasions, it is impracticable to extract the child alive through the natural passages. These three different terminations of protracted labour, have in-

duced practitioners to divide laborious cases into three orders.—The two first are principally owing to the force of the labour-pains being lessened ; and the last order is the consequence of disproportion between the infant and the passages.

The vigour of the pains may be lessened by general weakness, passions of the mind, weakness of the womb, and interrupted circulation of the blood.

1. General weakness of the woman sometimes protracts the labour. In most instances where this happens, it arises from her having been overfatigued during the first stage. When the body has been greatly reduced by some previous disease, the resistance is usually so much diminished, that there is little need for strong pains.

2. It may appear wonderful that passions of the mind should interrupt the progress of the labour-throes ; yet the fact is well known to practitioners. Every source of mental irritation should therefore be cautiously avoided during labour, and the most soothing and sympathizing attentions ought to be paid. An unguarded expression, or any thing rude or unfeeling in the conduct of the practitioner, may suddenly render the issue of the case tedious and uncertain.

3. Weakness of the womb itself is not unfrequently the cause of its diminished power. This is always to be expected, where its action is too strong during the first stage. The too early discharge of the water which surrounds the infant, an

accident so apt to occur when the practitioner is rash or ignorant, is usually, unless under a particular management, followed by this effect. Indeed, the life both of the mother and infant may be endangered by this occurrence.

4. Interrupted circulation of the blood is also, in some instances, productive of a weakened state of the pains. This is to be feared, and of course prevented, whenever the woman is particularly full during the latter months of pregnancy.

On some occasions, the cause of the two first orders of laborious labours is a trifling increase in the degree of the resistance ordinarily opposed to the birth of the child: thus, the unusual toughness of the membranes, a very relaxed state of the belly, some slight deviation in the position or size of the child's head, and tightness or unyielding condition of the orifice of the vagina, &c. may protract for some hours the sufferings of the woman, though, with proper attention, their influence may be entirely counteracted, or at least greatly diminished. A combination of these several circumstances is also sometimes met with.

The third kind of laborious labours is the effect of disproportion between the infant and the passages. In such cases, the life of the patient must be exposed to considerable danger; for by the continued action of the womb, the child is forced violently against the bones of the basin; so that the

fleshy parts which are interposed being much bruised, inflammation may be readily induced.

These are not the only hazards which may ensue from a defect in the capacity of the basin; for the proper and necessary assistance being delayed, the strength of the woman may be worn out, and such a shock given to the general system, as shall render her recovery precarious or incomplete.

Besides the form of the basin, there are other circumstances in the make of a woman that may retard delivery. Thus, the fleshy parts through which the child must necessarily pass, often occasion much resistance. This more generally happens in those who are advanced in life before they begin to have children.

In proportion as those parts are rigid, a greater length of time will be necessary for preparing them for the safe passage of the child. But if it be forced through them before such preparation, they may either be lacerated, or be so violently bruised, that very disagreeable and dangerous complaints may follow. In some rare cases the obstacles to delivery have arisen from diseases of the parts within the pelvis, but the exact nature of such cases cannot be detailed in a work of this kind.

1. Of the Unfavourable Symptoms which take place during Laborious Labours.

WHEN practitioners of midwifery have been properly taught, they understand the signs by which the

necessity or utility of additional aid are indicated, and they anxiously insist on such assistance before any alarming symptoms appear. But as persons who have never been regularly instructed are still employed in the practice of midwifery, in many parts of the country, it may be of material importance to point out the marks by which the approaches towards danger are to be distinguished, in order that there may be no delay in applying for proper advice.

While the first stage of labour continues, the only hazard to be dreaded from its protraction is the exhaustion of the woman's strength, provided the infant do not press injuriously on any part of the mother. Whenever, therefore, she can no longer sleep and take the ordinary refreshments which nature requires, this stage ought not to be allowed to go on for any considerable length of time.

In regard to the second stage, the pressure occasioned by the child's head upon the important parts within the basin, may, if protracted, interrupt the circulation of blood through them, and excite swelling and inflammation.—If there be much tenderness, with swelling of the belly; if there be hurried or oppressed breathing; if the urine cannot be passed, though there be urgent desire; if there be a sense of great tightness within the bones; if the assistance of the practitioner give pain; if there be much thirst, with frequency of pulse and other marks of feverishness; if there be such restlessness that the patient cannot remain in one posture above

a few minutes ; if there be headache, and most particularly, if there be a slight wandering of the mind as if from dreaming,—there is the most certain evidence that the efforts of nature can no longer be trusted to. Immediate delivery can alone, where any of those symptoms occur, save the patient from instant danger, or eventual distress and bad health.

The means by which the three different orders of laborious labour are to be discriminated, cannot be explained in a popular work. In many instances, it requires the utmost practical discernment to determine whether the labour-pains may yet complete the delivery, or whether the interference of art ought to be had recourse to. Such is the difficulty, that, on many occasions, professional men of considerable experience have differed in opinion in regard to this point. The great object to be aimed at should be, to ascertain what nature can do, and not what she can suffer.

2. Of the Management necessary during the two first Orders of Laborious Labour.

IN all such cases the strength is to be supported by suitable nourishment and cordials, and attention to ventilation ; and inflammation is to be guarded against by bloodletting. The most proper nourishment during labour is beef-tea, chicken-broth, and calves-feet or hartshorn jelly ; and the best cordials

are, tea, coffee, or barley cinnamon water, with now and then a very little white wine mixed with warm water.

Sometimes opiates are useful, but it requires a great deal of practical judgment to determine when this remedy may be employed with advantage. The safety, as well as the utility of an opiate, must be well weighed before it be prescribed, as nothing tends, in some cases, so much to disturb the progress of the labour as that medicine. The safety, both of mother and child, may be endangered by inattention in this respect, and perhaps this is the most frequent error to which impatient or selfish practitioners are liable.

Change of posture, where it has the effect of relieving the uneasiness of the patient, may, in general, be allowed in lingering labours, but whenever it tends to fatigue or incommode, it is both useless and hurtful.

If circumstances require an expeditious delivery after the second stage has become advanced, it is in the power of the practitioner (when there is no disproportion between mother and child) to accomplish it by the use of a very simple and safe contrivance.

In former times, no mechanical expedient with this intention could be employed without endangering the life of the child; but fortunately at present, practitioners are enabled to deliver the woman in cases where nature alone cannot be trusted, without injuring the infant in any degree.—In the begin-

ning of the last century, when the art of midwifery was advancing rapidly, the ardent zeal for improvement might perhaps have rendered instruments more frequently used than was really necessary. But this is not the case at present ; for every intelligent and honest practitioner now allows the natural powers to exert their full influence, before he attempts to interfere mechanically. Accordingly, the Editor of this work can solemnly declare, that during the course of thirty-five years' practice, he has not had occasion to use the instruments in question a score of times, when he had had the charge of the patient from the beginning of labour.

Although the use of instruments, in the hands of a skilful assistant, are not productive of any bad consequence, yet it must not be concealed, that considerable practice and experience, with a complete knowledge of the subject, are essentially requisite, otherwise much harm may readily be done. Many operations in midwifery require more dexterity than those of surgery in general, and their event is of greater importance, as two lives are at stake. The conduct of those women, therefore, who insist on their delivery being finished by mechanical expedients, whenever the labour-pains are not strong and forcing, is highly reprehensible. In such cases, the practitioner has occasion for the exertion of determined resolution, to resist the improper solicitations of the patient and ignorant attendants. Extraordinary assistance during labour should never be

given, except after the most deliberate examination of every circumstance of the case; and therefore no prudent and honest practitioner has occasion to conceal the use of instruments.

SECTION III.

Preternatural Labours.

WHEN any other part of the infant than the head is forced foremost during labour, the case is styled *preternatural*, or in common language a *cross-birth*. Of these there are two kinds, viz. *first*, where the lower parts of the child, and, *secondly*, where any other parts than these or the head, are found advancing.

The cause of the greater number of preternatural labours in general is unintelligible. It seems to be quite independent of any exertion of the woman, or any external accident to which she may be exposed. This is proved by the fact, that some have had a labour of this kind, after having been confined to bed almost the whole of pregnancy. But when the water that surrounds the infant is discharged prematurely, that is while the child still lies very high, the strong pains which follow are apt to push the head to one side, and the shoulder, or some other part, may thus be forced forward, or made to *present*, as it is technically expressed. This effect of mis-

management is not unfrequently met with in the practice of those individuals who have not been properly taught.

The signs of preternatural labours cannot be detailed in this work, but it may be proper to state, that the feelings of the woman herself are never to be regarded as evidence that the infant is in an unusual position. Many women have done themselves much harm by indulging in apprehensions of this kind, who, after all, have had a natural labour. That, on some occasions, the conjecture has turned out to have been well founded, cannot be denied, but every experienced practitioner must allow, that, in the majority of cases, this has not happened.

1. Of the First Kind of Preternatural Labours.

It has been already mentioned, that the infant, while in the womb, is folded up into an oval figure, and that the end formed by the head is usually placed next the basin. The other extremity, it is calculated, is found in that situation once in fifty or sixty cases. This accounts for the breech, or feet, being the parts most commonly pushed into the passage, where the head is not the advancing part.

In this kind of labour, if proper assistance be afforded, although the woman may suffer a little more pain than usual, her life cannot be in any hazard;

but there is always some risk of that of the infant. This arises partly from the womb compressing the navel-string, which it can seldom do where the head is forced foremost, and partly from the infant taking up more room, and consequently being apt to be longer jammed in the passage. For these reasons, the delivery ought not to be trusted to the natural labour-throes.

The great object, in assisting in such cases, should be, to accommodate the infant to the passages, so as to diminish, as much as possible, the resistance to its exit. All this is to be done by manual dexterity, and not by the exertion of force. Many most distressing accidents formerly happened, both to mother and child, from the principles upon which the delivery in this order of labours should be conducted, not being properly understood. In the present improved state of practice, however, it is seldom that any limb of the infant is hurt in such cases; and it is impossible that any injury can befall the woman herself, if the practitioner be at all skilful.

2. *Of the Second Order of Preternatural Labours.*

IF neither the head nor lower parts are placed next the passage, nature cannot, in general, accomplish the delivery; and therefore the life of the woman must depend on the position of the infant being changed. The operation by which this is performed,

is called, in the language of midwifery, **TURNING**, and consists in bringing the feet into the passage.

When the wrong position of the infant is discovered before the water is drained off, the operation of turning may be had recourse to with perfect safety, (provided the woman be in good health), and without occasioning much pain to the patient, or trouble to the practitioner. The same caution and dexterity, however, are necessary to save the infant in these cases, as in those where the feet are originally in the passage.

But when, either from the restlessness of the patient, or from the improper interference of the practitioner, the water has been evacuated at an early period of the labour, and when the precise nature of the case has not been understood before the discharge of the water, the life both of the woman and of the infant must be exposed to considerable hazard.

This proceeds from the womb becoming closely contracted round the body of the infant soon after the water is off, and from the spongy state of that part in the latter months of pregnancy already taken notice of, which renders it easily torn, if much force be employed. From these circumstances, the infant has not unfrequently been pushed through the substance of the womb into the cavity of the belly ; and in by far the greatest number of such cases, the accident has proved fatal. The operation of turning should never, therefore, be attempted by those who do not possess a perfect knowledge of the

principles necessary to accomplish it. Indeed it is in certain cases the most difficult operation which can be performed on the human body.

Women sometimes add much to the natural dangers attending turning, as the temporary pain which they must necessarily feel, instead of being suffered with patience, makes them unmanageably restless. On such occasions, any injury which may be done ought with justice to be attributed to their own fault, and not to an error on the part of the practitioner. It should be considered as a duty incumbent on every patient under similar circumstances, to submit with resignation to the management of the practitioner under whose care she is placed, provided she be satisfied with respect to his character and abilities; for an opposite conduct, besides hurting herself, by ruffling his temper, may prevent him from operating with that calm deliberation on which the safety of the infant at least must frequently depend.

SECTION IV.

Complex Labours.

IT would be improper, in a work of this kind, to detail, with great minuteness, all the untoward circumstances which may render the labour difficult or dangerous to the woman, and embarrassing to



the practitioner. But as there are some cases, where a great deal of hazard may happen in a very short time, if proper assistance be not at command, it may be useful to direct what ought to be done on such occasions.

1. *Plurality of Children.*

WOMEN occasionally produce two infants at a birth, sometimes three, and in some very rare cases four or five. A superficial observer might imagine, that these cases are favourable to the increase of mankind; but this by no means happens; for the woman's recovery is always more uncertain after the delivery of twins, &c. than after that of a single infant; and where the number of children exceeds two, they do not often live long after birth.

It was formerly remarked, that when more than one infant is contained within the womb each is included within a distinct sac: it is seldom, therefore, that the birth of one is prevented by the interference of another, though such cases have occurred, and have been attended with considerable difficulty.—As in cases of twins the breech of the one infant is generally opposed to the head of the other, one of them must be in a preternatural position. The management of such cases, therefore, requires particular attention, as not only the life of the infant, but also that of the parent, may be at stake.

It has been supposed that when women have conceived of twins, there are certain symptoms before delivery, by which that circumstance can be ascertained. But there are no sure indications of the existence of a plurality of children, till after the birth of one. The unusual bulk during the latter months, on which many people depend for such information, is very fallacious ; and hence it was well remarked by a practitioner of the seventeenth century, that in those cases where, from the appearance of woman, there is the greatest reason for suspecting twins, it often happens that there is only one child, while many women have a plurality of children, who exhibit before delivery no marks of such a circumstance.

After the birth of one infant, it is in general very easy to determine whether any other remains. This may commonly be done merely by feeling the state of the belly.

When the womb has originally contained no more than a single infant, it diminishes very much in size soon after the birth of the child, while the bowels, which were kept out of their natural situation in the latter months of pregnancy, immediately get forward to the fore part of the belly, and render it soft and yielding. But when a second child remains, the womb does not apparently diminish in size. The intestines, therefore, remain behind and at the sides, and the fore part of the belly has the same hardness as before delivery.

There may sometimes be complications which pre-

vent a practitioner from ascertaining, by this simple method, the existence of a plurality of children ; and in these cases other means must be adopted, as no woman can be considered safe till her exact condition in this respect be known.

It sometimes happens that the pains advance rapidly the second infant very soon after the birth of the first. In such cases, all that the practitioner has to do, is to be assured that the second infant is in a proper position, and to take care so to conduct the extraction of the after-births, that no alarming discharge may follow their expulsion.

But when the labour-throes cease or become trifling on the birth of the first infant, the object of the practitioner should be, neither to interfere before the woman have recruited sufficiently from her fatigue, nor to delay extracting the second child so long that the passages should become contracted, or that the after-birth of the first-born be separated. Inattention to this important rule has been the cause of the loss of many lives. In more than the majority of cases, not more than an hour should therefore be allowed to intervene between the birth of both children.

If the delivery be conducted on this simple and obvious principle, although in many instances it becomes necessary to alter the position of the second infant, and in that way the woman must be put to a little pain, yet all hazard, both to the mother and to the infants, may be almost certainly avoided. It

requires, indeed, considerable attention, after delivery, to guard against loss of blood, which is a very common occurrence in cases of plurality of children.

The precautions of marking the first born, and of disturbing the woman as little as possible, while binding up the belly, &c. are too obvious to require being particularly mentioned. The management of cases where there are more than two children, is not attended with more difficulty than that of twins.

2. Falling down of the Navel-String.

A PORTION of the umbilical cord may be forced down, either naturally, or in consequence of mismanagement. In the former case, it will be felt through the membranes at the beginning of labour; in the latter, it does not come down till after the waters are drained off.

The cord can fall down naturally only where it is uncommonly long, or where the infant lies in a cross position, and therefore such cases seldom occur. But when the waters are evacuated before the passages be properly prepared for allowing the advance of the child, the cord is frequently forced down before, or along with the presenting part.

When the cord is felt originally through the membranes, the patient should be kept very quiet, and in one posture, till the circumstances preparatory to delivery are completely accomplished; when

the practitioner, by turning the infant, may probably be able to save its life.

But when the early discharge of the waters has occasioned the protrusion of the cord, it is not always in the power of a practitioner to obviate the threatening danger to the infant, without exposing the life of the parent to much hazard, which is a risk that ought never to be incurred.

This accident can be prevented more certainly than it can be remedied, for the premature discharge of the waters very frequently is the fault of the practitioner or patient.—The great advantages, of quietness at the beginning of labour on the part of the patient, and of guarded caution on that of the practitioner, must be very obvious.—From what has already been said on this subject, it must be evident, that, from neglect of these necessary rules, many deliveries, which would otherwise be strictly favourable, are rendered painful to the parent and dangerous to the infant.

3. Convulsions during Labour.

THE precautions by which convulsions during labour may in many cases be prevented, have already been mentioned; and the dangers to which pregnant women are exposed, when attacked with this frightful disease, have also been pointed out. But when it does happen in time of labour, the

safety of the woman commonly depends on expeditious delivery ; and therefore the proper means for accomplishing so important an object must be employed without delay. As the treatment on such occasions is to be entrusted to a skilful practitioner alone, minute directions for that purpose are inconsistent with the nature of this work.

It is proper, however, to state, that the means already recommended for this disease, when it takes place during pregnancy, ought to be pursued till a practitioner can be procured. Copious bloodletting, and a free ventilation of air within the bed-chamber, should be instantly had recourse to, if violent pain of the head, or slight wandering of the mind, occur during the course of the labour. Excessive drowsiness during the pains, too, requires nearly a similar treatment, as it indicates an unusual determination of blood to the head.

Should the fit come on, the jaws are to be kept separate by means of a large cork wrapped up in a linen rag, otherwise the tongue may be bit through. Under such circumstances, the delivery cannot be too quickly completed.

4. *Flooding during Labour.*

IN a former part of this work, the dangers which result from a discharge of blood in the latter months of pregnancy were pointed out, and the circum-

stances by which that accident may happen were explained.

When such a discharge occurs during labour, it must arise either from an accidental separation of the whole, or more commonly of a part, of the after-birth, or from the unusual place of attachment of that substance. The patient's life is exposed to greater hazard from the latter than the former of these causes.

When the discharge is trifling, and does not originate from the situation of the cake, no apprehension should be entertained ; but the practitioner ought to stay very much by the patient, to be ready to interfere, in the event of the discharge becoming profuse.—In such cases, the woman should be kept very cool ; for which reason the bed-clothes ought to be few ; the room must not be crowded ; and the drink should be quite cold. Every thing which is heating, being highly pernicious, cannot be too strictly prohibited.

If the discharge be considerable, or so long continued that the patient's strength is much impaired, her safety will be found to depend on immediate delivery, which must therefore be accomplished on general principles. A few minutes delay, on such occasions, may prove fatal to mother and child.—

When the after-birth is unfortunately attached to the neck or orifice of the womb, the utmost danger is to be dreaded ; for the patient's life, notwithstanding the utmost judgment, courage, and dexterity of the practitioner, is always in jeopardy.

The flooding in many cases does not occur till after the infant is expelled. It then arises from the after-birth being partially separated, while the womb is not properly contracted, and can be stopped only by the extraction of the secundines. This operation, however, is not to be had recourse to on slight occasions, as a discharge to a certain extent is sometimes of material benefit. On the other hand, if assistance be delayed too long, the woman may sink, or her health may receive a shock from which she may never recover.

Flooding is not the only danger which results from the retention of the after-birth; for if it be not thrown off, within a short time after the infant is born, it becomes putrid, and induces an alarming fever, from which few women have recovered. If the natural powers, therefore, do not separate the secundines within an hour from the birth of the child, the practitioner should proceed to perform that duty. The cause of the adhesion may be the irregular contraction of the womb, or a diseased state of the after-birth itself, by which it is attached more strongly than usual. In either case, the woman must lay her account with suffering a great deal of pain; but as the object is no less than the preservation of her life, she ought to submit with fortitude. Delay beyond the period above mentioned may render the efforts of the practitioner either fruitless or hurtful. Many most distressing cases have happened from the refusal of the woman

to permit this assistance, or from the timidity or unwillingness to give pain which influence some practitioners.

In some rare cases, the adhesion is so strong that it is impracticable to separate the whole of the cake without tearing the womb. The portion that is left generally becomes detached in three or four days, and its expulsion may be promoted by the use of a stimulating lavement. Such cases require the most serious attention, lest any putrid portion be absorbed.

After the three stages of labour are safely completed flooding sometimes takes place. This is the effect of the womb not having become sufficiently contracted, and it requires different management in different cases. If the discharge be profuse, cloths soaked in cold water and vinegar applied to the naked belly, or even cold water poured on that part from a height, should be had recourse to. But sometimes the flooding is not observable by the attendants, as the blood congeals as soon as discharged, and is collected within the womb and passages. This circumstance may be feared if the woman become sick and faintish, or complain of ringing in her ears or dimness of sight.—In such cases, the womb must be forced into contraction by manual assistance.—In all cases of considerable loss of blood, large doses of opium, frequently repeated, are found of the greatest service in supporting the living powers.

CHAPTER IV.

TREATMENT OF WOMEN AFTER DELIVERY.

WHEN women have enjoyed good health previous to pregnancy, and when their labour has not been attended with any uncommon circumstance, their recovery after delivery can scarcely be precarious, except from inattention to those precautions which the peculiar state of their system at that time renders necessary.

Even in the most favourable cases, the exertions which are necessary to expel the child must occasion fatigue, and must increase the action of the heart and bloodvessels, while the resistance opposed by the particular form of the child, &c. is productive of a considerable degree of pain, so that a temporary fever is induced. The old maxim, that a woman, after delivery, should be considered as a person much bruised, is therefore founded on reason.

But the diseases incident to the child-bed state depend chiefly on the changes which happen after delivery, in the belly, in the womb, and in the breasts.

In the latter months of pregnancy, so large a portion of the cavity of the belly is filled by the womb, that the stomach and intestines are greatly compress-

ed, and the circulation of the blood is impeded through the neighbouring vessels. During labour, all these parts are compressed in an increased degree, and at the same time a considerable tenderness is excited in the passages through which the infant is forced. After delivery, the pressure is suddenly taken off from all the bowels within the belly, by the diminution in size of the womb, and the blood is allowed to pass freely through them.

The womb suffers great changes after the exclusion of its contents.—It contracts into a comparatively small size, and the orifices of many of its bloodvessels being somewhat open, a red-coloured discharge proceeds from them, for three, four, or five days, which gradually changes to a milky colour, then becomes greenish or brownish, and disappears entirely at different periods in different women, and according to various circumstances, depending on constitution, &c. This evacuation is called, in popular language, the *cleansings*, and, technically, the *lochial discharge*. Partly by means of this discharge, and partly by an increased activity of the absorbents connected with all these parts, the womb is gradually reduced in size, and restored to its natural shape and condition. This process, which is one of very great importance, goes on more rapidly and completely in some cases than in others. Till it be accomplished, the slightest exertions may be prejudicial.

Soon after delivery the breasts become distended, in consequence of a large determination of blood to

them, and from this the milk is formed. In some women this at first is productive of great pain, and of a smart symptomatic fever; but this subject must be resumed.

As there are certain natural causes of disease during lying-in, so there are certain disorders to which women of every description are liable for some time after delivery. Such are, loss of blood from the womb, fever, inflammation of different parts, affections of the breasts, and stoppage of the cleansings, with its consequences. Those who have been much secluded from the open air, little inured to exercise, and habituated to indulgence in the luxuries of genteel life, are liable to many other complaints.

This arises from the increased susceptibility of impression of the nervous system, which takes place in women of that description. In many instances this is in such a degree, that the most trifling circumstances occasion the greatest agitation of the mind. —Convulsions, fever, and delirium, have often been induced by this state of the mind.

SECTION I.

Ordinary Management after Delivery.

SOME degree of languor or faintness generally occurs immediately or soon after delivery, and is the

natural consequence of fatigue from the exertions during labour. It has been long customary on such occasions to give the patient something stimulating, by way of cordial, such as strong spirits, or drinks with wine and spices, &c.—Accordingly, a small proportion of warm negus, or a little panada, or when the languor is excessive, a piece of bread or biscuit soaked in wine, or a bit of sugar dipped in brandy, are the chief cordials allowed by prudent practitioners.

Moderate compression of the belly, as soon after delivery as possible, contributes both to relieve the faintishness, and to promote the contraction of the womb. This ought to be done without disturbing the patient; for, in many instances, very little exertion on her part, or any attempts to sit up, might bring on alarming floodings.

The bed-linen, and also the body and head-dress of lying-in women, may be in general shifted immediately after delivery, and should afterwards be frequently changed, otherwise the smell that is occasioned will sufficiently indicate the dangers which must arise from stagnant animal effluvia. The bed-clothes and dress of women on such occasions should be light, in order to prevent excessive sweating; they have naturally a tendency to perspire while in that state; but an immoderate degree of perspiration is always productive of bad consequences. It may perhaps be unnecessary to remark, that patients,

during lying-in, should always be kept as free from moisture as possible, and that a soft warm cloth is always to be worn.

The diet during lying-in should be particularly attended to. All gross meats which might overload the stomach, or, by heating the woman, prove a cause of fever, should certainly be strictly prohibited. But every patient, after childbearing, ought not to be half-starved, as some recommend. Beef-tea, veal, or chicken-broth, may be taken for dinner, for the first two or three days; but if the woman have been accustomed to a full rich diet, or if soups disagree with her, she may have something solid, as boiled fowl or chicken, white fish, or light pudding, from the beginning. Proper regard, in this respect, is to be paid to her habit, former manner of living, and present state. Too great indulgence, it must always be remembered, is more to be dreaded than too much abstinence, though both extremes are to be equally avoided.

For a few days after delivery, there is generally a good deal of thirst; and, provided the drinks be not heating (except the patient does not propose to nurse), the desire for liquids may be safely gratified.—Gruel, with sometimes a very little wine, toast and water, lemonade, tamarind, and apple-tea, barley-water, &c. are the most suitable drinks.—It is always proper that they should be somewhat warm, whatever the season of the year be.

After the third or fourth day of lying-in, two or even three glasses of wine during the day may be indulged in ; but, unless under particular circumstances, red wine of any description ought never to be allowed till the end of the second or third week, because all red wines tend to stop the cleansings. After the tenth or twelfth day, if the patient suckle her infant, she may be allowed a glassful of porter or of mild ale after dinner and supper.

From the state of the mind after delivery already described, it must be obvious, that every circumstance that tends to excite even the most trifling emotions when in health, should be cautiously guarded against during lying-in. For this reason, all the common and well-known means to prevent noise being heard should be employed.

It sometimes becomes necessary, from the situation of the bed-room, &c. to stuff the patient's ears with cotton ; but this should be had recourse to only in very urgent cases ; as the mind under such restriction is always kept in a state of anxiety, from the wish the woman has to understand what is going on among the attendants, and from the apprehensions which she may be led to entertain, if she be not indulged.

All visitors for the first ten or fifteen days ought to be denied access ; for besides the hazard of their mentioning some piece of news which may hurt the patient, the fatigue of talking, &c. might be pro-

ductive of the most serious consequences. A prudent, cautious friend, however, may be allowed to sit by the woman, and she ought to be enjoined to give an agreeable turn to her ideas, while she prevents her from too great exertions, and permits her to rest when she seems to have an inclination for it.

The common practice of making the nurse sit all night by the patient, is generally attended with much inconvenience, and is often the cause of many complaints. The experience of every lady who has adopted this practice, will confirm the observation ; for the nurse must either continue awake, or fall asleep. In the former case, she will endeavour to shew her attention, by tormenting the patient with offers of meat or drink ; and, in the latter, the noise which she may make while asleep, may be productive of the worst effects. The nurse, therefore, (except on extraordinary occasions) ought to sleep in a bed next the room of the patient, so that she may be ready to assist on every necessary occasion.

For the same reason the infant ought not to be dressed in the lying-in room, as the noise which it makes during the operation of washing, dressing, &c. may prove highly disagreeable or even alarming, till the mother's strength be completely restored, unless she be particularly anxious to superintend that operation.

The bad effects of confined or impure air are now almost universally known ; consequently, the pro-

priety and necessity of having the bed-curtains always open, of preventing many visitors from crowding the room, of removing, as speedily as possible, every thing which can contaminate the air, and of admitting occasionally the fresh air, by opening the windows and doors, must be very obvious. Coolness of the bed-chamber is of the very first importance. The heat should never exceed 60° of Fahrenheit's scale.

Measures are to be taken, within forty-eight hours after delivery, to have the bowels emptied, if they have not been opened naturally. When the woman suckles the infant, nothing more is required than to have the accumulated stools removed. This may be done by an emollient lavement, if the patient have suffered much during labour; if she have not, some mild laxative, such as calcined magnesia, with a few grains of rhubarb, or any laxative pill to which she may have been accustomed, are sufficient. Much mischief has, in some cases, been done by the common castor-oil, and, therefore, no other than cold-drawn castor-oil ought to be allowed to a lying-in woman.—The mild laxative thus advised is to be taken every second day, as long as necessary.

But when the milk is to be discouraged, some purgative, which shall tend to procure several loose stools without griping, is to be prescribed, and is to be repeated every third or fourth day, according to circumstances, till the milk disappear. The laxative

draught prescribed for this purpose in the appendix, generally answers very well.

Women were formerly obliged to remain in bed for a certain number of days after delivery, by which they were much weakened and fatigued. In modern times the practice has passed from one extreme to another. This circumstance should surely be regulated according to the strength of the patient; and hence no invariable rule can be established. When the woman feels that she can easily undergo the fatigue of rising, which, in ordinary cases, happens about the third or fourth day, she ought to be taken out of bed, that it may be properly adjusted. If she be made to sit upright, she may suffer considerable uneasiness; and, at the same time, by the bulky womb (for that part is not, in the better ranks, restored to its natural state till two or three weeks after delivery) pressing forcibly on the soft parts at the bottom of the basin, the foundation for a very uncomfortable complaint, already explained in the first part of this work, the falling down of the womb, must unavoidably be laid. She ought, therefore, to be placed in a position half sitting and half lying, when out of bed, as long as the womb continues enlarged, by which means these inconveniences will be avoided.

For the same reasons, walking, even from one room to another, at least as long as the lochial discharge continues, and the womb is bulky, is highly

improper. Many women boast that they have been able to go through the whole house within eight or ten days after delivery ; but they often find, at a subsequent period of life, by the complaints which they suffer, that they had little cause to be satisfied with their own prudence, or the attention of the practitioner who indulged them in such liberties. Confinement to one room for two or three weeks, especially in warm weather, may certainly be deemed improper, and therefore, if well in other respects, the patient may be allowed to occupy the drawing-room through the day after the second week ; but, unless the womb be reduced to its original and natural small size, she ought, for at least a certain time, to be carried thither, and to be placed in a reclining posture on a sofa.

After the fourth week, in some cases sooner, the patient may be permitted to go abroad. The common practice on this occasion, of going first to a crowded church, cannot be too strongly objected to. It must be confessed, that the wish of returning thanks to the Author of her existence, for having preserved her life amidst the pains which she had suffered, ought to be impressed on the mind of every pious woman. But the duty which she owes to her family, should induce her not to expose herself to the hazard of having her perfect recovery interrupted ; and hence, till that be established, she ought to avoid all crowded places, where, from the heat, impure air, long confinement, &c. she might

be injured. On going abroad she should therefore, for the first few days, take an airing in a carriage, then walk a little when the weather is favourable, and defer going to church till she feel herself in the natural state of good health.

SECTION II.

Management of the Breasts, and Milk-Fever.

WHEN the woman proposes to give suck, the infant should be put to her breast as soon after delivery as her strength will permit, and the breasts should be previously gently washed with a little warm milk and water, in order to remove the bitter viscid substance which is furnished round the nipple, to defend those parts from excoriations.

In many cases, where the individual has never nursed before, the nipples at first are not sufficiently prominent to afford a proper hold for the child. In such cases, it has long been customary to have the breasts *drawn*, as it is termed, either by an adult, an old child, or by the young of some of the brute species, as a whelp. In general, however, the degree of violence used on these occasions, is productive of considerable injury, and more gentle means may commonly be employed.

Thus, the breasts may be fomented by flannels wrung out of warm water, and then a glass or ivory

cup, mounted on a bag of elastic gum, or a quart bottle previously warmed, may be applied in such a manner to the nipple, as to draw it out gently and gradually, making at the same time moderate pressure on the sides of the breast with the hands. There is another instrument for the same purpose, which, possessing more power, ought to be used with much caution ; it consists of a glass cup, adapted to receive the nipple, to which is added an air-syringe with a valve ; by working this, the nipple may be drawn out to as great a degree as the operator may find necessary. This instrument should never be employed by unskilful people, otherwise it may injure the breast ; but, if it be skilfully used, after the operation has been repeated two or three times, the infant, except in extraordinary cases, will find no difficulty in sucking.

At first, the patient should not be fatigued by the long continued or frequent application of the child ; and when it is applied, she ought to be gently supported by pillows in bed, in a reclining posture, and every precaution must be used to guard against cold, if she cannot give suck while lying.

When the woman cannot or will not nurse, every circumstance which can contribute to the secretion of milk should be carefully avoided. Great abstinence is therefore to be enjoined ; as little drink as possible is to be taken, and ripe acid fruits, as apples, strawberries, &c. ought to be used to assuage thirst.

The breasts, when nursing is declined, are commonly greatly distended for the first two or three days; and, in many cases, a considerable degree of pain, with sometimes a violent fever, are occasioned. These symptoms, however, are of short duration, as they generally terminate after twenty-four or thirty-six hours, by a profuse sour smelling sweat, a gentle looseness, or a copious discharge of milk from the breasts.

Many practices have been adopted, with a view of preventing altogether those painful sensations, (termed the Milk-fever), but they are more often productive of bad than of beneficial effects. Thus, stimulating substances have been applied to the breasts, with a view to check entirely the secretion of milk; but inflammation of the lungs, or even of the brain, has sometimes been found to follow this practice; and unless some outlet for the milk be previously established, no attempts ought to be made to repel it.

If the breasts be gently rubbed with any mild stimulant, such as camphorated spirits, the soap liniment or olive-oil and brandy, or if they be kept covered by rags soaked in any simple ointment, such as a composition of one part of bees-wax, and three of fine olive-oil, with a little honey, renewing the application twice or thrice a day, the hazard of inflammation may in general be obviated.

When there is no uneasiness from the distention of the breasts, it is improper to have them drawn,

either by natural or artificial means; for inflammation, with its painful consequences, may ensue; but great relief is sometimes experienced when the distention is very great, from merely rendering the nipples pervious, which may be done by drawing a few tea-spoonsful of milk from each.—It has been already stated, that some doses of brisk laxatives are necessary to secure the expulsion of the milk.

SECTION III.

Injuries in Consequence of Delivery.

INVERSION of the womb, though formerly not an unfrequent accident, is now a rare occurrence. This, among many other happy consequences, has been the effect of the public instruction of midwives, a measure introduced into Scotland by the late Dr Young. Before his time, any woman of intrepidity and address who chose to practise midwifery found employment; and, for a while, it required all his industry and professional talents to shew the folly of trusting the delivery of women to such persons. Even they who pretended to the sacred name of Philosophers joined in the prejudice. Dame Nature, they said, is the proper midwife, and nobody can be better qualified to attend to her dictates than Dame Ignorance.

Dr Young might, with great facility, by publish-

ing a few of the horrible blunders committed by the midwives resident in Edinburgh when he began practice, recorded in his note-book, (which is still in existence), have offered many most powerful arguments against such opinions; but he preferred the more philanthropic and dignified method, of shewing by its effects the utility of his plan. Such has been the public conviction on this subject, that, in the present day, there is scarcely a parish of Scotland, the midwife of which has not been regularly taught. If the difficulty of instructing women to act as midwives, and Dr Young's disinterestedness in that task, were universally known, a just tribute might be paid to his memory.

There are two degrees of the inversion of the womb, viz. the partial and the complete. The former, which is the more ordinary one, appears in the form of a swelling as large as a child's head, protruded without the passages immediately after the expulsion of the after-birth, accompanied with violent forcing and bearing-down pains, and followed by flooding, faintings, and urgent fruitless attempts to make water. This arises from a part, more or less, of that portion of the womb, which had extended previous to delivery above the bones of the basin, being turned inside out, which is commonly occasioned by the navel-string being forcibly pulled at, before the natural separation of the after-birth. It may be very readily distinguished by a practitioner of discernment from every other affection.

If proper assistance be procured in time, the womb thus partially inverted can be replaced. Delay in such a case may prove fatal, or, by rendering it impracticable to reduce the inversion, may subject the woman to a continual drain of bloody fluid, which, while it destroys health, must eventually shorten life. Under these latter circumstances, indeed, it is in the power of an active practitioner to ameliorate the health, and to lessen the danger, by directing means for corrugating the extremities of the uterine vessels, and for establishing, if necessary, a substitution for the periodical discharge.

The other degree is so complete an inversion of the womb, that it is torn away from its attachments to the sides of the basin, the immediate consequence of which generally is instant death. It is believed that no more than six cases of this kind have occurred in Edinburgh within the last sixty years. And it is rather surprising that such an accident should have ever happened; for it must require not only a violent exertion of strength to pull out the womb in this way, but a most unfeeling disregard of the sufferings of the patient. It is probable that partial inversion is first induced, and that the swelling being mistaken for something which should be brought away, is violently pulled by, till the death of the patient too fatally shows the mistake.

Every degree of inversion of the womb may be certainly prevented, seeing that such an accident can

arise only from rash and ill-directed endeavours to extract the after-birth, by drawing down the navel-string, before it be completely separated. That the natural powers are inadequate to the separation of the secundines, in every instance, is a fact too well known to require any illustration; but it is a fact which has been totally kept out of view by those who have so extravagantly extolled the powers of Dame Nature, and, in consequence, till within the last half century, many valuable lives were annually lost in this city from the retention of the after-birth.

The excessive dilatation sometimes required for the exit of the infant, and the thickening which always follows delivery as the preparative to the restoration of the original condition of the passages, occasion a degree of soreness, and of uneasy feelings, that not unfrequently lead the woman to suppose herself torn. These feelings are removed by bathing at first with warm milk and water, and afterwards with warm spirits and water. But where the swelling is considerable, an emollient poultice ought to be applied, and renewed every four hours. If any feverish symptoms, or violent heat and throbbing pain, be felt in the swelled part, a practitioner should be immediately consulted, as there is considerable hazard from inflammation of those parts.

Sometimes there really is a laceration of the passages during the birth of the infant. This, in most

instances, is the effect of mismanagement, though cases certainly have occurred where the accident has happened in a slight degree, notwithstanding the utmost care of the most skilful assistant. The nature and extent of the injury are very various. Where the laceration is inconsiderable, little more than the ordinary management is required, as the process by which the passages are restored to their former state tends to reunite any slight separation of parts.

If the partition between the passage to the womb and the straight gut be torn completely asunder, the consequences are very deplorable, unless the utmost possible attention be paid on the part of the practitioner. Till within these few years, no well-authenticated instance of perfect reunion was known ; but it is now ascertained, that if proper means be steadily pursued, before a diseased state of the lacerated parts have taken place, this may be effected. It is an object of no ordinary consideration, for there are few complaints which, to a person of delicate feelings, prove more intolerable.

Laceration of the urinary bladder is occasionally met with. This may be the effect of mechanical injury by the unskilful use of instruments ; but it is more frequently occasioned by the child's head being allowed to remain too long wedged within the bones. In some constitutions, this latter cause is much more apt to take place than in others. This injury may be suspected to have happened, if the woman

cannot retain her water, nor pass it in the usual way, and it is readily ascertained by examination, which in every case is absolutely indispensable ; because sometimes those symptoms proceed from mere weakness of the bladder.

When incontinence of urine is the consequence of this latter cause, it may be cured by the application of cloths soaked in cold water and vinegar to the lower part of the belly, and by the use of internal strengthening remedies. Should these fail, a blister upon the back of the bone at the lower part of the spine, has generally proved efficacious.

Loss of substance in the urinary bladder may be repaired by proper dressings, provided the accident be understood and attended to at the beginning. In one case, where, from the ignorance and selfishness of the person under whose hands it happened, six weeks were allowed to elapse before skilful assistance was called, the reunion of the separated parts was effected. But, in general, if the disease be neglected at first, it proves quite incurable ; and the sufferer becomes loathsome to herself as well as disgusting to others, unless suitable means for preventing the urine from dribbling off be adopted. The mechanical contrivances for this purpose are still imperfect, though they certainly contribute to the alleviation of the complaint.

SECTION IV.

Faintings, Shiverings, and After-pains.

THE languid state which often succeeds to delivery, sometimes terminates in *faintings*. If no injury have been done during labour, and if the pulse and breathing be distinct and regular, little hazard is to be dreaded, and the complaint may be attributed to the peculiar state of the body and mind of the patient at that time. Such faintings are readily removed by the exhibition of any simple cordial, by keeping up a free circulation of air in the room, and by gentle pressure (by means of a soft warm compress) of the belly.

But when the faintings are attended with quick, irregular, or very feeble pulse and cold extremities, the greatest danger is to be apprehended; for it will generally be found that they are the consequence of some violent injury, or of great loss of blood. Recourse must then be immediately had to the advice of a practitioner; and till that can be procured, the patient's strength is to be supported by means of the readiest cordials at hand; while ardent spirits are to be rubbed on the face and palms of the hands, the head and shoulders are to be laid low by removing the pillow and bolster, and the window of the apartment is to be thrown open to admit freely the fresh air.

The application of stimulating substances, such as volatile salts, spirits of hartshorn, &c. to the nose, ought to be employed, under such circumstances, with much caution ; for when the patient is in a languid irritable state, any stimulating medicine rashly snuffed up, might endanger suffocation ; or, by exciting violent coughing or sneezing, would induce excessive or fatal flooding.

Shiverings sometimes occur from the same causes with faintings, and as their continuance is always hazardous, they require immediate attention. A little brandy, mixed with warm water, or a suitable dose of opium, should therefore be instantly exhibited, and the ordinary means for restoring warmth, viz. the application of heated flannel to the pit of the stomach and to the feet, ought to be had recourse to. The camphor jalap, or the volatile tincture of valerian, given as soon as the infant is born, commonly prevent both shiverings and faintings in those who have been formerly liable to such symptoms.

For some time after delivery, the contractions of the womb are apt to recur, and to occasion pains, which, in some cases, are so violent as to resemble the throes of labour. This complaint, termed *after-pains*, though productive of considerable uneasiness, is never to be considered as dangerous ; for even in the most urgent cases the sufferings of the patient from this cause are merely temporary, being seldom

protracted beyond the third or fourth day.—Women should know, that these pains, after they have ceased for some hours, are apt to return for a day or two every time the infant is applied to the breast.

After-pains are occasioned by clots of blood being formed in the cavity of the womb, or by the flow of blood being again directed to that part. They seldom occur during the first lying-in, but afterwards the more children a woman bears, the more is she distressed with these pains. This circumstance probably proceeds from the womb not contracting so readily and uniformly after several deliveries as at first.

Other complaints may be mistaken for after-pains, by which the proper opportunity for endeavouring to prevent their progress may be lost, and therefore the circumstances that distinguish this affection from every other disease ought to be universally understood.—When the pains are alternated with intervals of ease, when the breathing is not impeded, when coagulated blood is expelled in the course of the pains, and when pressure on the belly does not excite nor aggravate the pains, even although a degree of sickness and fever attend, the complaint may be considered to be after-pains. But if the pain be constant, or if it shift its situation, or if it be excited by pressure applied externally to the belly, some other disorder should be suspected.

A most melancholy evidence of the necessity for attending to these marks occurred in this city seve-

ral years ago. A lady, soon after delivery, complained of fixed pain in the belly, which the midwife obstinately insisted was the effect of after-pains. In vain did some of the attendants urge, that as this was the lady's first child this could not probably be the case, and in vain did they entreat that she would allow a physician to be called. She worked upon their feelings so as to lull their fears for nearly three days; at last, the husband took alarm, and when he procured proper assistance, he was told that the disease was inflammation in the bowels, which might have been cured at an early period, but was now beyond the power of medicine. In fact, mortification was going on, and accordingly death took place next day.

After-pains may be palliated by the exhibition of a large opiate immediately after delivery, and the repetition of a smaller dose every six or eight hours.—In cases where preparations of opium disagree, castor was formerly given; but experience has, in this part of the island, greatly lessened the confidence of practitioners in the virtues of that medicine.—The best substitutes for opium appear to be the camphor and the hyoscyamus; which latter may be given in form either of extract or of tincture.—Besides these means, if the pains be severe, warm flannel, or bladders two-thirds filled with hot water, may be applied to the lower part of the belly. In more urgent cases still, an assafoetida or opiate lavenment must be exhibited.

SECTION V.

Irregularities of the Lochial Discharge.

THE nature of the lochial discharge has been already hinted at ; but its appearance and duration vary so much in different women, and in the same woman on different occasions, that they cannot be accurately ascertained nor described.

Such discharge, for two or three days after delivery, consists almost entirely of pure blood, and furnishes an excellent means for carrying off the overload from the system. By degrees, however, the size of the bloodvessels shrinks, their extremities contract, the thinner part of their contents is alone expelled, and the colour of the discharge changes first to that of milk, and then to a greenish or brownish cast ;—and at last the evacuation ceases entirely. In some cases, this regular succession does not take place ; for the red colour of the discharge sometimes disappears and recurs now and then, till the womb be reduced to its original size, and have again acquired its former structure.

The cleansings in some women are very abundant, especially in those who do not nurse ; in others, they are in small quantity ; and yet, in general, neither of these circumstances seems to have much effect on the health of the patient, unless they occur in the extreme ; in which case, when too profuse,

all the complaints originating from weakness are occasioned ; and when too scanty, if no other discharge be increased, all the consequences of too great fullness are felt.

Sudden obstruction of the cleansings may be occasioned by exposure to cold, or by irregularities in management, and is a very alarming disease, being attended by most violent pain in the belly, smart symptomatic fever, sickness, and even difficulty of breathing.—This may be readily mistaken for inflammation of the bowels or of the womb, and can only be distinguished by a practitioner. The absence of the usual symptoms which occur in the former complaint, and the history of the previous state of the patient, furnish the chief marks of discrimination.

The return of the evacuation is to be promoted by the application of warm fomentations to the belly ; by the use of warm diluent drinks in small quantities often repeated, as gruel with a little wine, or white-wine whey ; and by doses of three or four grains of genuine James's powder, combined with opium, repeated at the distance of every four or five hours, till the effect be produced.

If this complaint be neglected or misunderstood for a few hours, it is apt to terminate in alarming inflammation, and therefore, under such circumstances, bloodletting from the arm to an extent proportioned to the state of the case, and the application of leeches to either or both groins, together with brisk purga-

tives, are without delay to be recommended.—It may be truly said, that the patient's life depends on the activity of treatment, when the disease has been allowed to run on for a few hours.

Deficiency of the cleansings requires little attention, unless it be attended with a sense of fulness in the lower part of the belly; or pain in the back, or bearing-down while walking; or unless the patient have formerly been subject to an eruption on the face. In either of those cases measures should be taken for increasing the discharge, because the former feelings are occasioned by the womb remaining more bulky than it should be, which can only be remedied by a copious evacuation of cleansings; and the same circumstance removes the tendency to eruptions of the skin.—This object may be accomplished by diaphoretic medicines joined with saffron, together with warm fomentations, and, in some cases, by the use of diuretics.

When the lochial evacuation continues beyond the ordinary time, or is excessive, and seems to weaken the woman, it proceeds either from injuries done during delivery, or from a previous diseased state of the body.

Although in such cases the treatment must be varied according to the cause; in general, Peruvian bark, either in the form of powder or of decoction, along with the elixir of vitriol, or some preparation of

myrrh, with nourishing diet, a liberal allowance of red wine, especially claret, and such other means as shall support the strength, will be found beneficial.

When this complaint does not yield to such simple remedies, the advice of an experienced practitioner ought to be had recourse to, that means may be adopted for preventing the train of nervous disorders which commonly succeeds profuse evacuations.

The importance of *cleanliness*, as long as the lochial discharge continues, does not require being pointed out; but when the evacuation has a bad smell, common attention in that respect is not alone sufficient; for unless the most scrupulous regard be paid to prevent its stagnation in the passage of the womb, excoriations, or inflammation, with all its formidable consequences, will ensue. The nurse must on such occasions be directed to wash out that passage, by means of a common bag and pipe, twice or thrice a-day, with warm milk and water, or with an infusion of chamomile flowers.

SECTION VI.

Pain about the Lower Part of the Belly, in the Lower Extremities, &c.

PAIN about the bones and fleshy parts at the bottom of the belly, and in the thighs, originates from

rheumatism, or from separation of the share-bones, or from an affection of the glands within the groin.

Rheumatic pains occur principally about the hips, the back part of the pelvis, and the thighs. They are known by the gnawing burning sensation which attends them, by their being most violent during the night, and by their not being invariably aggravated by moving. They are sometimes accompanied by feverish symptoms. These pains are the effects of cold, and in general prove only of temporary duration.

Different modes of treatment are required in different cases, such as bleeding, medicines which promote perspiration, and blisters. In every instance, rubbing the affected parts with anodyne or opodeldoc balsam, and covering them with soft flannel, must prove beneficial. The chief difficulty in these cases is to distinguish the nature of the complaint.

Separation of the Share-Bones is the effect of some former accident, of severe labour, or of inflammation within the joint which connects these bones. This affection is distinguished from every other, by the pain being uniformly increased or excited upon the slightest motion of the lower part of the body, and by feeling the share-bones rasp against each other when either leg is moved.

The treatment must depend upon the cause. Where these bones have been separated by a blow or a fall at a former period of life, they only require being held together by means of a broad belt, till

the patient have regained strength. The cold bath, whenever it is proper, should be used evening and morning, as it tends greatly to promote their firm reunion.—Where the separation is the consequence of a hard labour, a variety of means must be adopted in different cases.—Suppuration within the joint is a very rare occurrence. Its progress is tedious, and its termination uncertain; and therefore very particular attention ought to be bestowed upon the case from the beginning. The patient always continues lame till the bones be reunited.

Affection of the Glands within the Groin is indicated by swelling and tenderness about the flank, and follows injuries during labour, or exposure to cold, or the inflammation of some neighbouring part, or the irritation of the cleansings.

This disease takes place at different periods after delivery, from the fourth or fifth day to the seventh week. It is ushered in with pain in the back, smart fever, and painful stiffness in one groin. Soon after these symptoms the thigh begins to swell at the upper part, and gradually the swelling is extended to the whole limb, so that in a short time it is double the size of the sound one. It is rather pale-coloured than red; and hence in some parts of England has been called the *white leg*. It is hot, shining, very painful on being touched or moved, and at first it does not pit when pressed upon by the finger; it may be distinguished from every other disease by the above marks.

When left to nature, this complaint generally proves tedious and distressing. The swelling begins to subside at the upper part of the thigh; hard knotty bumps can then be felt along the back part of the limb; many weeks elapse before the patient can use the leg; and most commonly great weakness of it remains for years. Some women have been rendered hectic, and others dropsical, by the long continuance of this disease.

By active treatment at the beginning of the complaint, its progress may be certainly stopped. The application of flannels soaked in hot vinegar, or of leeches, or of a blister to the groin, brisk laxatives, friction with anodyne balsam, &c. when the swelling begins to subside, the continued use of certain diuretic medicines, and attention to the state of the cleansings, are severally necessary, according to circumstances, of which a medical practitioner can alone be the proper judge.

Crampish Pains in the thighs and legs sometimes attend after-pains, and sometimes arise from bilious cholic. They require different treatment in different cases, according to the nature of their cause.

SECTION VII.

Diseases of the Breasts.

THE structure of the breasts renders them the frequent seat of disease. Some of the disorders to

which they are liable can be readily removed when they first occur, but if neglected, become painful to the patient, and troublesome to the practitioner. Others can be more easily prevented than cured.

In a work of this kind, although the nature of all those diseases ought to be hinted at, the treatment of many of them must be necessarily passed over, as it should be referred to the care of medical practitioners, and ought never to be undertaken either by the patient herself or by the attendants.

When, along with the symptoms which are occasioned by the determination of milk to the breasts, any hardness or painful swelling is felt in either of them, which does not subside, after the general irritation ceases, a cooling diet, and an open state of the bowels, are necessary ; and the patient ought to remain in bed, as the weight of the breasts while in the erect posture often increases the inflammation.— After the infant has been applied, and the treatment formerly recommended has been pursued, immediate attempts ought to be made to prevent the progress of inflammation, by the use of a large warm bread and milk poultice, rendered soft by means of olive-oil or unsalted butter.

It was formerly the general practice to apply repellent substances in such cases, as preparations of sugar of lead, &c. but experience has now shewn that these do harm, and that the warm emollient poultices do not promote suppuration, unless the in-

flammation have proceeded so far that that process has already begun.—The infant should be applied occasionally, or the breast should be drawn by artificial means, provided the milk flow readily from the nipple ; but if otherwise, both the disease and the sufferings of the woman may be aggravated by such attempts.

When the swelling and hardness are confined to one part, if suppuration or festering take place, the boil is quite superficial, and as it speedily breaks spontaneously, and occasions little uneasiness, and heals readily, it does not impede nursing.

But when the whole breast is swelled and hardened, it constitutes a very serious, and, in many instances, a most distressing complaint, as it indicates a deep-seated inflammation of the glandular part of the breast. This is generally ushered in with shivering and a smart feverish attack, and its progress is often extremely tedious, and its final issue uncertain; for in some habits, unless very active means be employed, the constitution becomes undermined from the continuance of pain, and hectic fever, and purulent discharge. Even where the patient recovers, knotty indurations are apt to follow, which destroy the appearance of the breast, and lay the foundation for future mischief.

The chief errors committed by ordinary practitioners in the treatment of these complaints, are, not giving a free outlet to the matter whenever it is formed, and not employing sufficiently active means

to remove the hardnesses when they first take place. When, from any error of that kind, the complaint has been of considerable standing, a gentle course of mercury is sometimes required to induce the healing disposition.

From the delicacy of their structure, the nipples are very liable to be injured by the pressure of the infant's mouth in sucking, or by the irritation which the stagnant milk occasions, when they are not kept very dry. The most simple and favourable degree of injury from these causes is excoriation, or great tenderness in the nipples; which, although the source of considerable pain, ought not to prevent the patient from giving suck. These complaints more frequently occur while nursing the first or second child than afterwards; for the nipples lose much of their sensibility by use.

In the treatment of this affection the great object to be attended to is, to remove, as much as possible, every circumstance which can tend to irritate those parts. With this view, the nipples ought to be washed frequently with any gentle stimulating liquor which can diminish their sensibility, as brandy and water, a weak solution of alum, or of sugar of lead in rose-water, &c. and the milk should be prevented from wetting them, by the application of well-adapted breast-cases.—The glass breast-cases are seldom properly shaped, which, added to their weight, often tends to injure the breast. Cases made of double block-tin are now therefore used.

An artificial nipple, covered with a prepared cow's teat, was some time ago invented, as a protection to the sore nipple; and where the infant can suck through it, which is not always the case, it proves exceedingly useful, and saves the woman a great deal of pain.

If only one nipple be affected, it ought to be favoured as much as possible; and if both be injured, the same purpose may be accomplished, by procuring the assistance of a milk-nurse, to take charge of the child during the night. In general, when any medicine is applied to the nipple, it must be carefully washed off with a little warm water, before the infant be allowed to suck.—Rings made of pewter or bees-wax, are often useful in defending the nipple from the pressure of the woman's dress.

When these means are not pursued with proper perseverance, and sore nipples are neglected at first, they often prove distressing in the highest degree, and it frequently becomes very difficult to stop the progress of the disease. Deep sores are occasioned, which resist the power of every remedy, as long as the woman continues to give suck, and which may terminate in the total destruction of the nipple, if she persevere in nursing.

These sores or chops require a great variety of management. When the mother is anxious to nurse, if they be not very deep, although a cure cannot be soon obtained, the pain may be considerably lessened by proper dressings, till the sensibility of the parts be diminished, and a favourable

turn given to the ulceration. The dressings should be continued as long as possible, and ought to be removed only two or three times a-day, in order to allow the infant to suck.

In obstinate cases, the sores may be touched by means of a fine hair-pencil, with the liniment described in the Forms of Medicine, which often produces a cure in a very short time, after every other method has failed. When the chops do not heal by the means employed, nursing ought to be given up, otherwise the whole nipple may be destroyed.

Women who have been subject to sore nipples should endeavour in future to diminish the sensibility of those parts, by applying to them, for several weeks previous to delivery, cloths dipped in alum-water, in strong spirits, or in the pickle of salted meat boiled ; which latter has been recommended as an infallible specific for that purpose.

Sometimes minute ulcerations appear in the brown circle surrounding the nipple, and correspond with similar appearances in the child's mouth, or other parts of its body. In such cases a medical practitioner should be immediately consulted, and, if hard swellings in the arm-pits or ulceration of the throat of the nurse have already begun to appear, any delay might be most prejudicial.

SECTION VIII.

Irregular Feverish Attacks.

FOR two or three weeks after delivery, irregular feverish attacks are apt to occur, if the patient happen to be imprudently exposed to cold, or have not paid sufficient attention to those regulations in her management, with respect to diet, repose, &c. already explained.

Such feverish fits, styled in this country *weeds*, differ from other fevers in duration, for they seldom continue above twenty-four or thirty-six hours.

They begin with universal cold, and violent shivering, accompanied with headache, pain in the back, and sometimes with sickness. After these symptoms have continued for some time, a great degree of heat succeeds, followed at last by a copious sweat, which terminates the disease, but leaves the patient considerably weakened.

Irregular fevers of this kind are seldom productive of any immediate danger ; but from the disposition to future attacks which is always induced, a foundation is laid for subsequent complaints, especially if proper treatment be not pursued.

Symptoms resembling those irregular feverish attacks precede inflammation of the breasts, or of some of the bowels necessary to life, and have often been mistaken for them. There is, however, an obvious

distinction between these disorders; for when inflammation has taken place, there is always a fixed pain in the affected part, and the state of the pulse is very different from what occurs in the irregular feverish complaints now alluded to.

In the treatment of weeds, little aid from medicine is in general necessary; for due attention to the following simple management will commonly be found sufficient to overcome the disease, and to prevent its return.

During the cold fit, the endeavours are to be directed towards restoring warmth to the patient. If loads of bed-clothes, and quantities of heating and stimulating drinks, by way of cordials, be employed for this purpose, violent delirium, or a more obstinate fever, may be readily brought on.—Instead of this, when the shivering is considerable, warm flannels should be applied to the stomach and belly, and the same, or bottles filled with warm water, ought to be put to the feet. Warm diluent drinks, as orange-whey, barley-water, gruel, weak wine-whey, &c. may be freely drank. If the patient be very weak or low, a small proportion of undiluted wine is necessary; but that ought to be avoided, if possible. When there is reason to believe that the stomach is disordered, which may be discovered by the appearance of the tongue, and by the sickness that attends, gentle vomits are required.

As soon as the hot fit begins, a free circulation of cool air in the room must be encouraged; a strict

observance of the cooling regimen is to be enjoined, though the warm diluents may be continued, and the saline or nitrous jalap should be prescribed. Great care is to be taken that the bed-clothes be light, as it is of the utmost consequence to avoid confining the heat of the surface.

These means generally remove the burning heat and thirst, moderate the frequency of the pulse, and excite a gentle moisture over the whole body, in consequence of which a complete relief from all uneasy sensations is felt. The perfect recovery of the patient, however, ought not to be considered as fully established when the sweat comes out; for unless careful and judicious treatment be still pursued, a return of the disease may take place. Accordingly, if excessive perspiration be protracted too long, or checked suddenly, the effects will be equally hazardous. In the former case, nervous complaints or eruptive fevers may be dreaded; and in the latter, a second and more severe attack of the feverish symptoms may, with reason, be expected.

The sweating, when moderate, ought therefore to be encouraged, by warm diluent drinks, for six or eight hours, and then, if it do not stop, the drinks should be given in small quantity, very seldom, and made less warm. The patient is to be half raised in bed, and her bed and body linens are to be shifted, and the dry clothes are to be warmed, but not much heated. A moderate proportion of wine must, in some cases, be allowed before these operations be be-

gun. When costiveness occurs during the course of the complaint, it may be obviated by gentle laxative lavemens.

By attention to proper management, and especially by guarding against those circumstances which had probably occasioned the disease, the return of weeds may be prevented.—On this account the diet should be suited to the constitution of the individual. Where a disposition to nervous affection prevails, and where the patient has been accustomed to a full rich diet, the food must be more solid and nutritious than in other cases, and a liberal allowance of wine may be recommended. The Peruvian bark, or preparations of myrrh, when any strengthening remedy is necessary, ought to be prescribed.

In the irritable state of lying-in women, passions of the mind prove a frequent cause of irregular feverish attacks: they may, when violent, be suspended, and their effects palliated by opiates. Many women are subject to these complaints, from the interruptions in their night's rest, which arise from nursing. When this happens, the means for curing and preventing the disorder obviously consist in relinquishing a task for which such women are very unfit.

SECTION IX.

Eruptive or Rash Fever.

IN former times the *Rash Fever* was a very ordinary complaint during lying-in, but the improved



method of treating women in that situation, now almost invariably adopted in this island, has rendered it an uncommon occurrence; for it may be truly said to be always the effect of mismanagement.—This disease varies in its symptoms in different individuals, and even in the same person on different occasions, where the repetition of improper treatment subjects the patient to another visit of the complaint in a subsequent lying-in. In every case, however, the eruption begins upon the brow, neck, and breast, and consists of minute vesicles, which are more perceptible to the touch than to the sight, as they communicate the feeling of particles of sand diffused under the scarf-skin. These are usually red like port-wine, but sometimes they are milk-white, and sometimes of an obscure grey.

The most common varieties are, where the eruption follows continued sweating, or the sweating-stage of the milk-fever, or some disease productive of great weakness, or where it is preceded by violent fever, pain in the head, chest, or bowels, and evident symptoms of some internal inflammatory affection.

Most of these varieties originate, as already stated, from improper treatment; for whenever a lying-in woman is confined within a heated room, oppressed with a great quantity of bed-clothes, and forced to drink stimulating liquors, with the view of promoting a sweat, according to the absurd and pernicious customs formerly prevalent, she is almost always seized with rash fever. A disease of the same na-

ture, it may be mentioned in confirmation of this opinion, sometimes succeeds the same treatment of men who have been weakened by profuse evacuations. Almost all the varieties of rash fever may, therefore, be prevented, though, when they have taken place, they are not easily remedied.

In some rare cases bloodletting is necessary ; but much judgment is required to distinguish the propriety of having recourse to such a practice ; because, if it be employed where the symptoms of inflammation are not violent, it is a very dangerous expedient. The fulness of the pulse, when the eruption appears, is apt to impose on inattentive practitioners, and to lead them into much error. Opening medicines, cordials, blisters, the Peruvian bark, and a variety of other means, suited to the exigency of the particular case, are severally found useful.

Sometimes the rash fever is ushered in with the same symptoms as weed,—except that the oppression during the cold and hot fits is much greater ; that, previous to the sweating stage, there is the sensation of an universal prickling or itching of the skin ; and that the sweating is attended by a most perceptible acid smell, issuing from the surface, like the fumes of boiling vinegar. When the eruption freely takes place, the oppression is relieved. The eruption continues distinctly visible for from three to five days, and then gradually scales off.

If, by imprudent treatment, the rash be repelled, the shivering fit recurs with all the symptoms of

headache, oppression at the breast, &c. in an aggravated degree, and these are not relieved till it again appear. On some occasions, the original eruption does not prove sufficiently critical, and a second or third crop is necessary to remove the oppression. Great debility succeeds the declension of the rash.

These varieties are at first to be treated as the common weed, and after the eruption is evident, suitable means to prevent its recession, and to support or restore strength, must be adopted. Where the rash suddenly recedes, cordials, diaphoretics, and, failing these, blisters or sinapisms, are to be had recourse to.

SECTION X.

Malignant Child-Bed Fever.

THIS disease, which commonly invades within from twenty-four hours to the third or fourth day after delivery, begins with shivering, followed by pain in the belly in different degrees of severity, increased frequency of the pulse, pain in the forehead over the eyebrows, and an affection of the breathing, with more or less anxiety of countenance. Sometimes vomiting of bilious matter precedes the shivering.

If those symptoms be not checked, the belly becomes swelled and intolerant of pressure. Although the cleansings continue to flow as usual, the skin, both with respect to heat and moisture in some, is

little affected, but in others is at first hot and dry, and afterwards partially covered with a clammy sweat. The face is somewhat flushed, and the eyes are sunk; and although the patient has not the least disposition to sleep, and is evidently thirsty, she is so much dejected and unwilling to be disturbed, that she scarcely ever speaks to the attendants, seldom even asking for drink. She commonly lies on her back, and if turned on her side, soon resumes her former position.

In many cases, looseness of the bowels spontaneously occurs a few hours after the attack, and seems, for the time, to give great relief,—but a relapse soon follows. The belly swells, the pain becomes more acute, the frequency of the pulse and of the breathing increase, the strength fails; and, after three or four days and nights of suffering, coffee-coloured vomiting, with other marks of approaching dissolution, take place, and the fatal event happens, without any previous delirium.

Cases now and then occur, where the invasion of the disease is by no means well marked, and where the progress is tedious, the fatal termination not happening sooner than the eleventh or thirteenth day; and, on the other hand, the violence of the disease is sometimes such, that it invades within twenty-four hours, and runs through its fatal progress within forty-eight, even while the secretion of milk is going on. There are occasional variations in the symptoms, too, for, in some cases, the pain of the belly shifts to the chest, and is accompanied with harassing cough.

In this country, the disease seldom attacks individuals in the better ranks of society. It occurs chiefly among the lower classes, who inhabit confined apartments, in narrow, dirty, ill ventilated lanes.

Three different diseases resemble this very fatal fever in some of their prominent characters, but as they all equally require the most prompt assistance, it would not have been necessary, in this work, to point out the marks of distinction, had not certain endeavours been lately made to alarm the public on this subject.

Sudden stoppage of the cleansings, during the first week after delivery, inflammation of the womb, and inflammation of a portion of the gut, are severally accompanied with fever, pain of the belly, restlessness, and derangement of the stomach and bowels; and inexperienced practitioners are extremely apt to confound, under one title, all those four diseases. From suppression of the cleansings, and inflammation of the womb, the puerperal fever is distinguished by the continuance of the cleansings, and from inflammation of the bowels by the looseness which either spontaneously attends, or is, with great facility, excited by mild laxative medicines.

With respect to the nature of this disease, there has been not a little controversy amongst medical men. Experience has shewn, that it occasionally prevails as an epidemic in particular districts, and

also, that it has occurred (as an epidemic) in well regulated hospitals, at times when it has not appeared among the lower classes in the same city; and, moreover, in the districts in which it has appeared, it has seemed to follow the practice of individual practitioners. Thus, in several districts, according to testimony on which the Editor can depend, every patient, delivered by one individual, for a certain number of weeks, has been seized with the disease, while in the very same town, practitioners, in equally extensive practice, have not had a single case.

It is unnecessary to detail minutely, in this work, the mode of treatment to be pursued. In so dangerous a disease not a moment should be lost in calling for medical assistance. In the mean while, the exhibition of a brisk purgative, and the application of warm fomentations to the belly, ought to be had recourse to without delay. The subsequent treatment must be conducted, according to the Editor's experience, on the general principles of the cure of fever, produced by extensive internal inflammation, occurring in a state of weakness of the system.—On this point, it must be admitted, that there still is great diversity of opinion among the profession; and yet, if the accounts of certain published cases were true, an infallible remedy, for every individual affected with the disease, however varied her constitution may be, was discovered in Aberdeen in the year 1792, and revived in this city within these two years. The fallacy of such pretensions is too notorious to require any refutation.

SECTION XI.

Inflammation of the Womb.

INFLAMMATION of the womb takes place at some time between immediately after delivery and the fifth day, though it has happened later. It is generally preceded by shivering, which is followed by intense heat, quick hard pulse, great thirst, &c.

A violent pain in the womb is felt from the beginning; it gives the sensation of fulness and weight, with throbbing and burning heat. The immediate seat of the pain depends on the particular part of the womb which is affected. In some cases, therefore, it extends towards the navel, or is confined to above or below the share-bones; in others, it strikes backwards, or down both thighs; and when that portion of the womb in contact with the bladder is the seat of the disease, great pain and difficulty in making water are felt, and even a total suppression is occasioned. It is commonly attended with sickness.

This disease is distinguished from after-pains, by the pain being constant, and not alternated with intervals of ease, and by the sensation occasioned being very different from that of after-pains, for along with these no throbbing pain, attended with burning heat, is felt, but merely grinding-pains, like the throes of labour; and from other affections with which it is apt to be confounded by the inexperienced, by the womb feeling hard when pressed upon,

while the patient suffers an aggravation of the pain by such pressure, and by the total suppression of the lochial discharge from the very beginning.

Many causes tend to induce inflammation of the womb ; such as, difficult or tedious labour, artificial efforts to extract the child and its appendages improperly conducted, the exhibition of heating and stimulating drinks, &c. during or after labour, exposure to cold after delivery, while the woman perspires freely, or the immediate application of cold to the womb during the flow of the cleansings.—

Although all these circumstances tend to excite the disease, it is astonishing how seldom they do so, for inflammation of the womb is a very rare occurrence.

It terminates like other inflammatory affections ; but, from the extensive influence of the womb on other parts, together with the state of the contiguous bowels after delivery, its event must be always very precarious, even where suppuration takes place. When mortification is the consequence of this formidable complaint, the fatal event happens within a short time from the beginning of the disease. As the progress of inflammation of the womb is generally rapid, if not stopped when it first appears, the life of the patient must often depend on the original symptoms being properly understood and actively treated.

When the fixed throbbing pain, along with hard quick pulse, increased heat, thirst, sickness, &c. are disregarded at first, it is scarcely possible even to

moderate the distress, or to lessen the danger. Nurses and attendants should be therefore taught, not only to guard against the exciting causes of this disease, but also to dread the occurrence of those symptoms, and to take the earliest opportunity to mention them to the medical assistant. Many valuable lives have been lost from inattention to this very obvious rule.

Should the practitioner be called in at the invasion of inflammation of the womb, its progress may be not unfrequently stopped by bloodletting, the injunction of a very spare diet, plentiful dilution, with cool acid drinks, clearing out the bowels by means of gentle laxative medicines or lavemens, and fomentations applied to the belly. When this treatment is successful, an universal sweat, and copious flow of the cleansings take place, with an evident remission of the painful symptoms.

But if this do not happen, and if, on the contrary, the pain becomes more acute, with throbbing, and a greater degree of fever, together with sickness, delirium, or much restlessness, the inflammation may then be expected to terminate either in mortification or suppuration. In the former case, the languid state of the pulse, the low delirium, and clammy sweat, will sufficiently indicate the event; but in the latter, the pulse continuing firm and full, and the throbbing pain becoming more violent, shew that suppuration will ensue. Mortification most generally occurs where the body has been previously much weakened, or where the habit is very bad.

Practitioners who are not called in at the very beginning of the disease, cannot pay too much attention to the circumstances of the case. If they mistake the fulness of the pulse, which occurs while the suppuration is going on, and order blood-letting at that stage of the complaint, either the suppurative process must be interrupted and gangrene induced, or, if suppuration do take place, such debility will follow the discharge of the matter, that the patient may eventually sink from hectic fever.

The safest outlet for the matter is by the passage from the womb: but this favourable event does not always happen; for sometimes it is discharged through the straight gut, though more often by an abscess in the groin, in which case the cure is tedious, and a considerable lameness for a long time frequently ensues.

During the discharge, the Peruvian bark, in substance or decoction, should be taken twice a-day or oftener; nourishing diet, with plenty of ripe fruit, ought to be recommended; the belly must be kept open; and if the matter come off by the vagina, that part must be often washed out by an infusion of chamomile flowers, or of bark with myrrh, (in the manner already advised), in order to prevent inflammatory affections of that passage.

SECTION XII.

Accidental Feverish and Inflammatory Affections.

The common LOW FEVER sometimes accidentally happens during lying-in. It is distinguished from other fevers by pain in the head and back, frequency of pulse, foulness of the tongue, and great general weakness, without any affection of the belly, or of the lungs, occurring at the beginning of the disease.

Notwithstanding the delicate state of women after delivery, *low fever* appears most commonly in them in its mildest form; and therefore hectic or dropsical symptoms are more to be dreaded as the result of the disease, than any immediate danger, though sometimes, as in other cases, it proves fatal. The treatment must be regulated according to the particular circumstances of the individual case.

ANOMALOUS feverish symptoms are on some occasions the consequence of accumulations of bile, and are known by the attending symptoms of nausea, oppression of the stomach, distention or pain of the belly, &c. The symptoms are merely temporary; but they are always productive of much uneasiness to the patient, and of considerable anxiety to the attendants. The cure of these complaints depends upon the expulsion of the bile, and on the adoption of proper means to prevent its being again accumulated.

INFLAMMATION of the BOWELS is apt to occur at any period during lying-in. It is attended with violent pain in the belly, particularly about the navel, striking towards the back, sometimes relieved by the expulsion of wind, and always increased on being pressed upon by the hand, together with sickness, thirst, feverish heat, and generally with costiveness.

This is one of the most alarming diseases which attacks the human constitution, as it sometimes runs through its course to a fatal termination within a few hours; and even where its progress is not so rapid, it often baffles every exertion of professional skill. Immediate assistance should therefore be procured whenever this disease even threatens, and the most active treatment, to allay the inflammation, ought to be pursued.

INFLAMMATION of the LUNGS or of the parts lining the *chest*, is also not an uncommon occurrence in the lying-in state. It generally begins with some degree of shivering, followed by fixed pain in the chest, inability to take in a full breathing, commonly frequent cough, and great heat and restlessness. This, as well as inflammation of the bowels, is a most fatal complaint. Both are occasioned by exposure to cold, or irregularities of diet.

The treatment of this disease requires the most serious attention, and the most active exertions. If bleeding, and the other means necessary to check the progress of the inflammation, be delayed for even a few hours, the patient may be irrecoverably lost.

Several slight feverish and inflammatory complaints, besides those above enumerated, are from time to time met with in lying-in women, the treatment of which must be conducted upon general principles, and ought to be confided to regular practitioners.

SECTION XIII.

Spasmodic Affections.

COLIC is one of the most common diseases of lying-in women. It is distinguished from inflammation of the bowels, by the pain being alternated with intervals of ease, or being aggravated by fits, by the belly being much distended, and by the pulse being (commonly at least) regular. It must at the same time be understood, not only that it often requires much attention and practical knowledge to distinguish the two diseases, but also that the one sometimes precedes the other. The safe rule therefore is, that wherever what appears to be colic is very violent, medical assistance should be immediately had recourse to.

This disease is generally the effect of previous costiveness, though, like inflammation, it certainly is sometimes produced by exposure to cold and irregularities of diet.

Laxatives, emollient lavemens, fomentation of the belly, medicines calculated to expel wind, and,

where inflammatory symptoms threaten, bloodletting, with a variety of other means, must be employed.

CRAMP of the STOMACH or bowels is most apt to take place within ten or twelve days after delivery. It is almost always occasioned by drinking *cold* or acid liquors. This disease is so fatal, and so rapid in its progress, that it has been known to destroy life within little more than an hour from the first attack. It ought to be universally known, that the longer it is allowed to continue, the more difficult it is to check its progress.

If cramp of the stomach be attended with deadly sickness, a large dose (*i. e.* two tea-spoonsful) of spirit of hartshorn, mixed with some hot water, ought to be instantly swallowed; and if that prove of no avail, seventy or eighty drops of laudanum ought to be given, while flannel, soaked in hot spirits, should be applied to the pit of the stomach. These means may be employed until medical assistance be procured; for, although in some cases the cramp be relieved by this practice, it sometimes proves so violent as to require the most active medicines in the most powerful doses, and consequently any delay or trifling may render the situation of the patient desperate.

CRAMP of the BOWELS is seldom so suddenly fatal as that of the stomach, but it ought to be treated in nearly a similar way.

SECTION XIV.

Alvine Fluxes.

LOOSENESS and CHOLERA sometimes attack lying-in women.

The former of these complaints is to be regarded as serious only, where it has been preceded by costiveness, or where it is attended with pain in the back, and alternated with excessive discharges of blood from the womb.

In either case the disease requires the utmost attention, as its removal must depend upon the cause being ascertained and counteracted. Many deplorable cases have occurred, where inattention to this obvious principle has occasioned the loss of valuable lives.

When costiveness has preceded the looseness, pain generally attends every stool, and a continued irritation is kept up. In such cases, laxative medicines, particularly neutral salts, glysters, and mucilaginous drinks, furnish the best means of cure.

If violent discharges of blood from the womb be alternated with looseness, the cause will be found to be some great irregularity in the diet or conduct of the patient. As the utmost danger is to be apprehended, every possible attention ought to be paid from the beginning. Cooling laxative salts, dissolved in a very large proportion of water, and given

in frequent doses, with weak nourishment, great quiet, and firm compression of the belly, by means of a flannel roller, sometimes have the effect of stopping the progress of this alarming complaint. But more active and varied treatment is often necessary.

Notwithstanding the great quantity of bile formed during the latter months of pregnancy, *Cholera* is a very rare occurrence during lying-in. The violent vomiting and purging of bilious matter, with the great pain in the bowels, and cramps of the limbs, and excessive weakness which attend this disease, and which are aggravated by every stool, characterize it from every other complaint.

Cholera in weakly constitutions is always precarious in its event ; but in general, during lying-in, it is more alarming than really dangerous.

Diluent, consisting chiefly of weak beef, or veal or chicken broth, and opiates frequently repeated, are in general sufficient to allay the violence of this disorder.

SECTION XV.

Delirium.

DELIRIUM, or wandering of the mind, sometimes accompanies the milk-fever, or the weed, and then

is only a temporary symptom, which ceases upon the original disease being removed. But sometimes it is the effect of phrenzy (or what is vulgarly called *brain-fever*), or of real mental derangement.

PHRENZY is not a common occurrence in this climate. When it does happen, it takes place within two or three days after delivery, and is preceded by restlessness, pain in the head, hurried mode of speaking, great susceptibility of impression in the eyes and ears, and very frequent pulse. Outrageous raving follows, while the appearance of the countenance remains quite natural, and the ordinary excretions go on as usual.—In this, as well as in all serious inflammatory or feverish complaints, the breasts soon grow flaccid, the milk being no longer formed.

This disease usually proves fatal about the third or fourth day after the attack; but sometimes its progress is not so rapid, though it is equally mortal. Before death, the raving ceases, the features shrink, the eyes seem glazed, clammy sweat covers the upper parts of the body, the lower extremities grow cold, stertorous breathing supervenes, and convulsions commonly close the scene.

The great circumstance which distinguishes this alarming disease from madness is, that the ideas are quite incoherent, the patient being incapable of attending to, or comprehending, any connected reasoning, and appearing quite unconscious of surrounding objects; whereas, in madness, she can always be

awed for a time at least into calmness, and seems to comprehend whatever is going on among those about her.

It is generally in the power of an attentive practitioner to discover the threatening symptoms of phrenzy, and to check their progress by active means. But where this disease has been allowed to take place, it has, hitherto at least, baffled all human art.

MENTAL DERANGEMENT although a most serious affliction, is, in more than the majority of cases, of short duration, when it occurs in lying-in women, if proper management be adopted.—The most obstinate and the most alarming form of the disease is melancholy.

It seldom begins sooner than eight or ten days after delivery, and then appears in the form of fright from a dream, or of some accidental cause of alarm, or in that of some incongruous wish or action. It is commonly unattended with fever, and very rarely at first (unless the wishes of the woman be much thwarted) with outrageous raving. Where this latter circumstance takes place, the violence of temper is exerted against some particular object, and not indiscriminately against whatever presents itself. The reasoning, too, is rather founded upon erroneous principles, than inconsistent or incongruous.

Very trifling irregularities of diet, or in the regulation of the mind, are apt to occasion this most deplorable malady in some constitutions ; and it is not

easy to specify any obvious marks by which this tendency can be discovered. It is a curious and an important fact, that sometimes suckling the infant produces melancholy, or other modifications of this complaint.

When the disease has actually happened, the treatment must be varied according to the circumstances of the case. If active remedies at the commencement prove of no avail, the most soothing mild conduct towards the patient ought to be invariably pursued, and the suitable means to promote general good health are to be adopted. The woman is never to be left to herself for a single instant.

In cases of settled melancholy, the patient ought to be removed from her family, and placed under the charge of strangers, as the variety of scene, and the restraint necessarily imposed on her, tend greatly to rouse her exertions, and to shorten the duration of the disease.

The recurrence of this disease, in cases where it has formerly taken place, may be prevented, by pursuing steadily measures calculated to remove the increased susceptibility of impression which follows delivery, and by guarding against all exciting causes of the complaint.

SECTION XVI.

Complaints aggravated by Lying-in, and Disorders induced by Nursing.

EVERY disease productive of great weakness is increased by the state of the system which follows child-bearing. Of this description are consumption, dropsy, vitiated condition of the fluids, &c.

Where any of these complaints have certainly preceded delivery, there is every reason to dread their fatal termination before the end of the month. But sometimes symptoms resembling them, arising merely from nervous affections, occur in lying-in women. It is of great consequence, therefore, to distinguish such cases, in order that complaints which may yield to suitable treatment, may not be neglected from being considered desperate.

Nurses are liable to two disorders, in consequence of the drain of milk proving too weakening for their constitution, viz. *first*, Constant weakness of the back, excessive languor through the day, violent sweating during the night, gummy eyes, with dimness of sight, great thirst, and total loss of appetite; and, *secondly*, Actual inflammation of the eyes.

These complaints are, in some women, the natural effects of attempting to give suck; but, in general, they may with propriety be attributed to some

inattention on the part of the woman ; such as allowing the infant to sleep with the nipple constantly in its mouth, not studying regularity in the hours of rest, not adapting her food to the supply of milk which the child may require, &c.

Delicate women, for the purpose of guarding against such disorders, should employ an assistant to give suck to the child during the night, for at least the first two or three months. It is a mistaken notion that two kinds of milk are hurtful to the infant.

But where these affections have actually happened, they can only be removed by giving up all attempts at nursing.

MANAGEMENT
OF
INFANTS AND CHILDREN.

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CHAPTER I.

MANAGEMENT OF INFANTS.

As the corporeal frame of the infant differs greatly from that of the child and of the adult, independent of the size and the external form, it is necessary to premise a slight sketch of those differences, in order to shew the utility and necessity for the rules suggested for the ordinary management of infants during health and disease.

The infant, when in the womb, surrounded by a fluid which defends it from external accidents, and supplies it with an equable degree of heat, nourished by a somewhat which its own bowels do not prepare, and furnished with the vivifying principle of air, by a simple though wonderful machinery, may be said to vegetate only.

But when separated from the mother by the process of delivery, it undergoes a great and important revolution. The supply of heat and protection from injury must depend on the attention of others; nourishment must be prepared by the digestion of food received into its own stomach; and the benefits of air can be obtained only by the operation of breathing.

When the structure of the infant at the time of birth is examined, it is found that the bones are soft, spongy, and imperfect. Those which, at a future period, are single pieces, are generally divided into several portions; and almost all of them have their extremities or edges in a state of gristle. Their appendages, too, are both large and relaxed; so that the articulations are feeble. The fleshy parts are flabby, and the cellular substance is in great proportion.—It follows, from the above state of the bones and muscles, and cellular membrane, that the body of the infant has no marked regularity of shape, and no steady support, and that the movements of its limbs are limited.

With respect to the vascular system, all the vessels, both bloodvessels and lymphatics, are extremely numerous, and have their actions very frequently repeated, evidently for the purpose of promoting the growth. This is clearly shewn, both by the great quickness of the pulse, and by the rapidity with which the secretions and excretions are performed. The nerves are numerous, and so highly susceptible

of impression, that many circumstances which do not seem to affect a grown person, have very considerable influence on the infant. Such are impurities of the air, slight alternations of heat and cold, damp, &c.

All the circulating fluids are mild and watery, and are furnished in considerable quantity; thus, the chyle and blood are more nutritious than at a future period, and the slimy and gelatinous fluids are more bland. Even the bile and urine have little acrimony.

On looking at the various parts of the person of the infant, the most superficial observer must see numerous peculiarities in the texture of the skin, the head, the trunk, and the extremities.

The skin is delicate, exquisitely beautiful, most sensible to external impressions, and has such sympathy with every part of the system, that it not only transmits impressions made upon it to the lungs, and to all the parts concerned in digestion, but it also receives depositions from the inordinate or irregular action of the vessels of the internal parts, thus relieving those parts from all the consequences of an overload.

As to the head, its disproportion to the other parts of the person is most remarkable; and as its bones are thin, and not indented into each other, but connected by membranes, the brain, which is very soft, and supplied with an immense quantity of blood, may be readily compressed and injured.—The eyes at first have no power of distinguishing objects;

and are so delicate that they suffer from the slightest accidents.—The nose, from the state of the membrane which lines it, is readily affected by cold.—The ears, like the eyes, for some time do not appear to exercise their peculiar function ;—and the mouth does not seem supplied with teeth, although, in fact, the milk-teeth are actually formed, but are covered by the gums.

The trunk of the body is not so firm as to support properly the superincumbent, nor protect the contained parts ; for the spine, as well as the breast-bone, are in a great measure gristly. The ribs, indeed, are more perfect than any of the other bones, but they readily yield to external pressure ; and the fleshy parts which enclose the belly, being soft and delicate, cannot afford much protection to the important bowels contained in that cavity.

Immediately after birth, the lungs, hitherto small, collapsed, and supplied with little blood, begin to perform the operation of breathing, and to receive, as they continue to do during life, the whole blood of the body. At first they are weak and irritable. The heart acts with great force and quickness, so that the pulse of the infant is always frequent.

The liver, which at first is of a remarkably large size, diminishes progressively after birth, especially on the left side. The stomach is small, and of a very delicate texture ; and the same may be said of the various portions of the intestinal canal. In the great guts a black, viscid, tenacious matter, called

in medical language the Meconium, is lodged. The kidneys are large and lobulated, and the urinary bladder seems to be situated higher in the belly than at a subsequent period.

From the state of the extremities in respect to the imperfection of the bones, the flabbiness of the ligaments, and the softness and weakness of the fleshy parts attached to them, the limbs are incapable of performing their proper duties.

The wonderful changes by which the size and strength of every part of the body are increased, and the perfection of all its complicated machinery is perfected, proceed gradually, and are not fully accomplished till the period of puberty; but in this work it is understood, that when all the milk-teeth are protruded above the gums, the individual is no longer to be considered as an infant,—childhood then commencing.

SECTION I.

Means to be used for the Recovery of Still-born or Weakly Infants.

THE laudable and active exertions of the HUMANE SOCIETY, by having been the means of restoring life on many occasions, where it was formerly thought impossible, have proved to the world

that apparent death happens more often than might be believed.

As still-born infants have been occasionally recovered under circumstances where experience alone could have encouraged such hopes, practitioners of midwifery have been taught the importance of employing, with patience and attention, the means conducive to this purpose.—If there be marks of putrefaction, it need scarcely be remarked, it is unnecessary to make any attempts at resuscitation.

Still-born infants are found in three different states ; for there is either no pulsation in the umbilical cord, or the pulsation is soft and distinct, and the infant has the natural appearance ; or the pulsation is oppressed, the shape of the head is deranged, and the face of the infant is livid.

The following means, suited to each of these states, are pursued in the Edinburgh General Lying-in-Hospital.

I. *When no pulsation is felt in the cord.*—1. The infant is to be instantly separated from the mother, the cord being tied by a slip knot.

2. It is to be immersed in water warmed to the degree of blood-heat, with its head placed uppermost.

3. The lungs are to be filled with air by means of a common syringe (the pipe of which is to be inserted into one nostril, while the other and the mouth are carefully closed), or any other ready contrivance,

and are then, by gentle pressure on the breast, to be emptied. In this way the lungs are to be alternately distended and compressed for some time.

4. Should the action of the heart be now perceived, the same means are to be continued until the infant exhibit the usual marks of beginning respiration, when the artificial distention of the lungs is to be only occasionally repeated, and all pressure on the breast is to be avoided.

5. But if, notwithstanding these means, the pulsation in the heart be not restored, the infant should be taken out of the warm water, placed before the fire, carefully rubbed, and then wrapt in warm flannel.

6. A glyster, consisting of a tea-spoonful of spirits, and two or three table-spoonful of warm water, should then be exhibited, and the temples, nostrils, and teguments of the face round the mouth, should be gently touched with a feather dipped in spirits of hartshorn, or any other stimulating liquor.

7. In the event of the failure of all these means, if the infant be apparently full, the effects of a small discharge of blood may be tried, by replacing it in the warm water, and removing the ligature from the cord.

II. *When the pulsation in the cord is soft and distinct, and the infant has the natural appearance.*—1. So long as the placenta remains attached to the uterus, the infant ought not to be separated from the mother.

2. The body should be carefully wrapt in warm flannel, the nostrils and lower parts of the face should be touched with a feather dipt in spirits of hartshorn, or volatile tincture of valerian ; a little spirits should be poured on the breast, and the buttocks and soles of the feet should be slapped with the palm of the hand.

3. If the after-birth become detached (which is known by the lengthening of the cord), the infant must be immediately separated, and the above (2.) means employed.

4. Should the process of breathing commence after these means have been used for a few minutes, nothing else is to be done than keeping the infant warm, with its face freely exposed to the air.

5. But should this event not take place, the lungs are to be distended, &c. as in the former case.

III. *When the pulsation in the cord is oppressed, the shape of the head is deranged, and the face of the infant is livid.*—1. The infant is to be immediately separated from the mother ; the cord being loosely tied with a single knot.

2. Blood is to be allowed to issue from the cord until breathing begin, or until the natural colour of the face be nearly restored ; a table-spoonful or two is the quantity commonly required for this purpose.

3. Should the beginning process of breathing proceed slowly, very gentle means may be employed to restore the proper shape of the head, but otherwise the efforts of nature alone are to be relied on.

4. If no signs of breathing be perceived, the cord is to be tied, the infant placed in warm water, and the lungs are to be from time to time distended with air, by the means already recommended, and the additional discharge of a small quantity of blood may be tried.

5. The use of every thing irritating must be carefully avoided.

Although alive when born, the infant, in some instances, lives only a short time. If the lips be pale, and the pulsation in the heart very feeble or slow, it may be suspected that this is owing to some cause which is not cognizable to the senses. On the supposition that it proceeds from a deficiency of vitality, stimulants have been applied to the surface, as a little brandy, or spirits of hartshorn, rubbed on the ribs and back-bone, &c. ; and certainly such means have occasionally proved efficacious, though, in the majority of cases, they fail.

When the extremities are of a purple or blueish colour, and the breathing is impeded or unnatural, it is generally found that there is a defect in the heart or lungs (more commonly the latter), which is beyond the power of any remedy. In one case of this kind, where the infant seemed uncommonly full and vigorous, several leeches were applied ; but, although their bites discharged a good deal of blood, neither was the breathing relieved, nor the dark pur-

ple colour of the surface altered, so that death followed in a few hours.

SECTION II.

Original Imperfections.

INFANTS are not always born in a state of perfection with respect to the structure of their bodies ; for sometimes they have deficient, superfluous, or misplaced parts, natural passages closed, and marks on various parts. Many of these imperfections admit of no remedy, while others may be easily rectified.—It would be inconsistent with the nature of this work to describe minutely all the species of malconformation which occasionally occur ; and therefore the following observations relate only to those most frequently met with.

There are sometimes blemishes about the mouth, which may prevent sucking. Of these fissures in the lips always constitute the most remarkable deformity. These imperfections appear in many different forms ; for sometimes the fissure exists only in one lip, generally the upper one, and is occasioned merely by a division of the parts. In other cases, there is a considerable loss of substance in the divided parts. In some instances there are two fissures in one lip, or both lips are affected ; and in others

the fissure is not confined to the lips, but extends along the roof of the mouth. All these different species of the same deformity receive the general name of HARE-LIP.

The treatment of the hare-lip must be varied according to many circumstances, which can only be determined by an experienced surgeon. If the child can suck, the operation by which alone the blemish can be removed, should be deferred till he be several months old at least, as the parts will then be better adapted for retaining the pins by which the cure is accomplished.—But when sucking is prevented, the operation may be tried, though it affords only a forlorn hope.

The tongue is naturally bound down to the lower part of the mouth, by a membranous cord, to prevent it from too great a degree of motion. Sometimes, however, the cord fixes it so much that the infant cannot suck ; in which case he is commonly said to be TONGUE-TIED. It is very often imagined that infants have this defect when it does not really exist ; and perhaps one instance of it does not occur in several hundreds of those who are born.—The malformation may be always readily discovered by putting a finger gently into the mouth ; for if this be grasped as if it were the nipple in sucking, or if the tip of the tongue appear disengaged, the membrane does not require being cut.—The operation of cutting the tongue, though very simple, has sometimes proved

fatal, for so great a quantity of blood has been lost as to destroy the infant. This danger may be very easily prevented by a little attention on the part of the surgeon.

When the tongue is not bound down sufficiently, the tip may be turned back, and close up the throat. This accident, which is luckily a very rare one, must soon occasion death. It may be discovered by the threatening suffocation or convulsions, and by the introduction of the finger into the mouth. The melancholy consequences of this disease can only be prevented by pulling back the tongue, or exciting vomiting by tickling the throat.—If the infant cannot suck, although the tongue appear to be in a natural state, weakness of the lower jaw, thickness or swelling of the glands in the under part of the mouth, or some defect about the nurse's nipple, may be suspected.

The *natural passages* of infants are sometimes shut up, and prevent the usual excretions. This is known by examining the cloths and parts affected. In some cases slime alone proves the obstacle; but in others, membranous substances close up the passages.

In every instance where any thing uncommon is observed, the infant should be carefully examined by a skilful surgeon, that the proper means for affording relief may not be too long delayed. In some rare cases, it unfortunately happens that no assistance

can be given. It is, however, generally proper to try the effect of an operation.

Deformities in the lower extremities, styled CLUB-
FEET, sometimes occur. As they are not only great blemishes, but also productive of much inconvenience at a future period of life, every parent is interested in their removal.

The gristly state of the bones of the foot renders a cure in most cases practicable, when the proper means are begun immediately after birth; but if the deformity be not attended to till the infant be some months old, the cure will be difficult and precarious.

For the removal of this deformity, the most simple means may be employed, the great principles to be held in view being to restore the misplaced parts to their natural situation, and to keep them there. The mechanical contrivances for these purposes have been greatly improved within these few years, for which the public is much indebted to Mr Sheldrake of London. The late Mr Marrison, residing in Edinburgh, acquired also deserved credit for his mode of treating such cases; and another artist in the same line, Mr Fortune, now pursues in this (latter) city, perhaps an improved method. Dr Colles of Dublin has recommended a very simple and cheap apparatus.

While every credit is due to the ingenuity and the attention of the artist, to whose management club-feet should be referred, the superintendence of

the case ought always to be allotted to some regular practitioner. White swelling and other diseases of the joints have sometimes ensued from inattention to this hint.

TUMORS, that is circumscribed swellings about the BELLY, if discoloured or semitransparent, are always extremely dangerous; but now and then instances have occurred where a cure has been effected by a surgical operation.—Those tumors, which are situated at the root of the navel-string, and the base of which is surrounded by purple-coloured thickened skin, are the most common, as well as the most fatal, varieties met with; and yet infants with this defect have sometimes been saved.

Tumors seated upon the *Back-bone*, called in medical language SPINA BIFIDA, are also occasionally found in new-born infants. If they be semitransparent, and of a magnitude not less than half of a hen's egg, they inevitably prove fatal, though the life of the infant may be protracted for a very considerable time.

When the surface of the tumor is not discoloured, the progress of the disease, when left to nature, is generally slow, but sooner or later the swelling increases, the semitransparency takes place, an orange-coloured fluid exudes from its surface, it eventually bursts, and convulsions and death speedily follow. The lower on the spine that the tumor is situated,

the more gradual is the progress to the fatal event. Thus, in one case, where it was at the very bottom of the back-bone, the child lived under this disease for nearly thirteen years and a half, during which time he continued incapable of retaining his stools and urine, and he had no power of moving the lower limbs.

Some years ago, Mr Astley Cooper of London introduced the practice of puncturing those *tumors* with a minute needle, and compressing them firmly, by means of a suitable apparatus.—That this plan has been successful, admits of no doubt, but the cases which can be treated by this method are seldom met with. Unless the tumor be of a small size, and be not discoloured on its surface, any attempts for its cure or alleviation are found to be quite unavailing.

FLESH-MARKS, when above the surface of the skin, can always be in a great measure removed without the assistance of the knife; and even when they are on the level of the skin, their ugliness may be greatly diminished by early attention on the part of the practitioner.

RUPTURES in different parts, especially at the navel, are not unfrequent occurrences; fortunately they are not attended with so much danger as similar disorders in grown people.—Where the disease is confined to the navel, a broad piece of flannel, in the

form of a roller, together with pieces of adhesive plaster applied over the part with a ball of cotton, forming what has been termed by surgeons a *graduated compress*, by affording a safe and firm support, prove so useful, that as the infant acquires strength the rupture commonly disappears.

The other varieties of *rupture* are often cured by the natural increase of size and strength of the body, and require chiefly attention to the due regulation of the bowels, and the daily use of the cold bath.—No truss ought to be employed for at least the first two years of life.

SECTION III.

Injuries in consequence of Birth, or of Mismatchment soon after it.

WHEN the infant has been detained a long time in the passage, the several parts subjected to pressure are liable to be injured. The most common of those injuries are swellings on the *head*, or alteration of the shape of that part.

First-born children are generally affected with some degree of swelling on the crown of the head. This, however, usually disappears in a few days, and requires no other treatment than the ordinary means employed by the nurse, viz. rubbing it very gently with a small quantity of weak spirits every

morning. When these swellings do not, after a few days, yield to the above means, a variety of treatment is required, such as the application of lime-water, a blister, &c. ; but as all such cases ought to be referred to an experienced surgeon, it is unnecessary to specify them.

Although the shape of the head be much altered, in consequence of long-continued pressure during the birth of the infant, it very soon recovers the natural form. The practice among nurses, therefore, of endeavouring to give the head a proper shape, by squeezing and pressing it with the hands, &c. is unnecessary, and ought never to be allowed, on account of the dangers which may be the consequence.—But it is a very good precautionary measure to allow the navel-string to bleed freely before being tied, wherever the shape of the head is much altered.

Scratches on the head, like the marks caused by a whip-cord, frequently occur after tedious or difficult labours ; but they require no particular attention, as they soon disappear.

In some cases, where the infant has come down in an unusual direction, the *face* is much affected, the eyes being inflamed, the nose flattened, the lips swelled, the features distorted, and the colour of the countenance livid. These frightful appearances usually go off in a few days, when no violence has been done by improper interference during the delivery.

Other parts than those already mentioned are likewise liable to swelling and discoloration from the same causes ; but as they seldom prove troublesome, no other management is necessary than allowing the umbilical cord to bleed a spoonful or two before it be tied.

The *limbs* are in some cases *fractured* or *dislocated* by the rashness and awkwardness of the practitioner. These accidents, on some rare occasions, unavoidably happen from the situation of the infant ; but are most frequently to be attributed to ill-directed attempts to accomplish the delivery.

From whatever cause such disagreeable occurrences originate, they ought never to be concealed from the attendants, but, on the contrary, the proper means to remedy them should be immediately adopted. Many infants have been rendered lame for life, from the practitioner by whom they were brought into the world having allowed a dislocated or fractured limb to pass unobserved.

Management of the Navel.—The common method of treating the navel is so universally understood, that it requires no particular description in this work. The portion of cord which is left next the belly, drops off within five or six days after birth, and leaves a tenderness that is generally entirely removed in a week or two, by the ordinary means which nurses employ. A split raisin applied

every morning underneath the singed rag, accelerates greatly this process.

But sometimes, whatever precautions be used, a rawness round the edges, or some degree of ulceration, remains, and proves very difficult of cure. This arises, in some cases, from a small excrescence, not nearly so large as the half of a garden pea, sprouting up from the root of the cord, and, in others, from an erysipelatous inflammation. As the most fatal consequences have been occasioned by neglect in such cases, and as a great variety of treatment is necessary under different circumstances, a practitioner should always be consulted.

Excoriations.—From the delicate structure of the skin of infants, *excoriations* readily take place wherever one part of it is in constant contact with another, unless the most careful attention be paid to keep every part dry. The ears, neck, arm-pits, and groins, are chiefly liable to be affected in this manner.

When the tendency to excoriation is observed, its progress may be checked by dusting the affected parts morning and evening with prepared tutty or calamine stone, or common chalk finely powdered. But when, from neglect, the excoriation is accompanied with a discharge of matter, much care and attention are required to heal the part. In former times it was even deemed unsafe to do so, practitioners having yielded to the prejudices of nurses, who allege that such discharges prove a salutary outlet for some overload in the system.

There can be no doubt, that while in general excoriations are the effects of inattention, (and it must be admitted, that in gross infants no ordinary care can altogether prevent them), if they have been allowed to discharge matter for a considerable time, the sudden stoppage of the discharge might be most prejudicial.—But, on the other hand, there is always the risk that the ulceration may suddenly spread and injure some internal part. Accordingly, the Editor saw two cases in one season, where an excoriation behind the ear suddenly extended to the internal parts of that delicate organ, and proved fatal within forty-eight hours.—In every case, therefore, suitable means are to be adopted for preventing and healing excoriations.

Whenever any of the parts liable to this affection appear red and tender, the progress may be immediately checked by being carefully washed evening and morning with the solution of white vitriol, described in the Appendix under the title of Weak Astringent Lotion.—If the excoriation have actually taken place, different remedies will be found useful in different cases, such as washing the affected parts evening and morning with any stimulant lotion, as brandy and water, and covering them with spermaceti ointment or Turner's cerat, or anointing them with a liniment composed of equal parts of fine oil and lime-water. While these means are employed for gradually healing the excoriations, a more than usually open state of the bowels is to be promoted by the occasional exhibition of gentle laxatives.

Swelling of the breasts.—Infants, of both sexes, are liable, a few days after birth, to the formation of a milky-like fluid in the breasts, which is apt to produce painful swelling and inflammation.—The uneasy sensations occasioned by these swellings seldom continue above a few days, being sometimes relieved by the spontaneous oozing of the fluid.—These swellings seldom require any other treatment than dusting them with fine wheaten flour, or bathing the parts with warm milk and water, or rubbing them very gently with warm olive-oil, evening and morning. Emollient poultices are never necessary unless the swelling and inflammation are considerable.

It should be universally known that the very common practice of ignorant persons forcibly squeezing the delicate breasts of a new-born infant, in order to discharge the milk, as it is called, is the most general cause of inflammation in these parts. The consequence of this practice often is suppuration and abscess; and hence, besides the hazard of disagreeable marks in the bosoms of girls, the future woman may be prevented from ever fulfilling the duties of nursing. Parents cannot therefore be too careful in watching against this unnatural and improper custom.

Sore Eyes.—Infants for a few days or weeks after birth, are subject to sore eyes, which not only render them fretful and uneasy, but also sometimes, if neglected, induce disagreeable blemishes, or even total blindness.

This complaint is very often occasioned by the imprudent exposure of the infant to large fires or much light; it is also frequently caused by cold. The mildest species of this disease appears under the form of an increased secretion from the eye-lids, glueing them as it were together.

The cure consists in guarding against exposure to large fires or much light, and to cold, and in bathing the eyes, morning and evening, with warm milk and water, and twice or thrice through the day with a very weak solution of sugar of lead, or of the acetate of zinc.

But when the eyes, and their appendages, are so much swelled that the infant cannot open them, a violent inflammation having taken place, succeeded by the constant discharge of matter, the eye may be completely destroyed if proper assistance be not had recourse to. The treatment, in such cases, must necessarily vary according to circumstances, as the application of a leech to the temple, of a blister on the top of the head, and the use of a weak solution of opium in water, and brisk purgatives, are severally necessary.—In some cases, it is necessary to have recourse to the scarification of the internal surface of the eye-lids, which, though formidable, is not a painful nor dangerous operation, and is always most efficacious.—When infants are affected with habitual weakness of the eyes, the cold bath, and frequent exposure in the open air, afford the best means of relief.

SECTION IV.

Ordinary Management of Infants.

IT has been calculated upon what may be supposed very conclusive evidence that one-half of the infants born in crowded cities die under ten years of age ; and although a great deduction may be allowed for original and hereditary feebleness of habit, yet it must be conceded that much of this mortality ought to be attributed to some error in the ordinary management of infants.—All the circumstances relating to cleanliness, to clothing, to food, to air and exercise, and to the regulation of the bowels, should, therefore, be minutely explained to parents, that they may be enabled to counteract the prejudices of dry nurses, which are more frequently injurious than has been generally supposed.

Cleanliness.—The first washing should be performed with very great gentleness and caution, by means of warm water, which is preferable to any of the washes formerly employed. Spirits are highly pernicious ; and greasy substances can never be useful, and may perhaps prove hurtful. The neck, arm-pits, and groins, commonly require more attention than any other part, because there is often a thick tenacious slimy scurf on them ; and rough rubbing, especially on the latter parts, might be very

injurious. Long-continued attempts to bring off every supposed impurity, however gentle, should never be allowed ; for what remains will readily yield to the next washing.

The most scrupulous attention to cleanliness in other respects, not only after birth, but during the whole period of infancy, cannot be too strongly inculcated. For the first two or three weeks, the infant should be bathed morning and evening, in tepid water, and afterwards in cold water. The whole body ought to be washed in the morning, and the lower half at night. Every part should be kept quite dry ; and all accidental impurities, as wet clothes, &c. must be removed as soon as discovered.

By a very little attention, infants may be taught to make water and to expel the excrements at stated times ; and therefore, except in cases of disease, the clothes should never be wet nor dirty. A little timber pot may be employed to receive the natural discharges from within a fortnight after birth.

Clothing.—The unnatural tight swathing in which infants were formerly incased, is fortunately in this empire now entirely exploded (though still continued in France), and long-established custom has in this respect happily yielded to the suggestions of reason and experience. The stricture of bands and rollers must not only be painful, but hazardous ; for it tends to interrupt the circulation of the blood, and thereby to check the growth in some parts, and to

give an improper direction to the growing process in other parts.

Speculative reasoning has, however, on this subject sometimes led very ingenious persons to run into an opposite error to that which is now abolished, for the wish to allow the infant all possible freedom of its different limbs and functions, has made them suppose those restrictions of dress, suggested by the experience of nurses, to be unnecessary or hurtful. Thus, the disposition which infants have to rub their eyes with their little hands, is very apt to excite inflammation of those tender parts, and the frequent fits of screaming, to which they are so liable, readily occasion rupture at the navel. It is easy by a little attention to prevent those occurrences.—A pinafore may be so applied over the shoulders as to give perfect freedom to the arms without allowing the fingers to touch the eyes, and a roller may be so adapted to the belly as to guard against any protrusion of the navel without detriment to any of the bowels.

With these precautions, the clothing of infants should be light and simple, constructed in such a manner that it may be easily and readily applied. Although it must of course be suitably adapted to the climate and season, it is always to be made to afford a considerable degree of warmth, for the young of all living creatures require a certain proportion of heat to promote the progressive growth of their several parts. Tape is to be used as much as possible, in-



stead of pins; and the whole dress ought to be so loose that the infant shall have free liberty to move and stretch its little limbs, as far as may be consistent with its welfare.

It may seem very unnecessary to advise that the night-clothes ought to be both lighter, and more loosely adapted to the person, than the day-clothes, in order that the heat may not be confined, and that the limbs may not be cramped. But obvious as this precaution so evidently is, it is almost constantly disregarded by nurses, and the consequences are not only interruption to sleep, but also confinement of the blood to the internal parts of the body, by which a foundation must occasionally be laid for future disease.

Purging.—Infants when born have a certain quantity of dark coloured stuff, something like softened opium, accumulated in their bowels, which, if retained beyond a certain time, is apt to become acrimonious, and to excite irritation. It is not wonderful, therefore, that the endeavours of practitioners a hundred years ago were most anxiously directed to the early discharge of this feculent matter, and that various drastic purgatives were employed for that purpose. Considering the extreme delicacy of the infantile frame, it is astonishing that the violent purgative medicines formerly advised did not prove more frequently fatal.

If the soft sugar dissolved in water, which is com-

monly in the present day given from time to time immediately after birth, do not, in the course of five or six hours, produce a free evacuation from the bowels, a solution of manna, or a dose of cold-drawn castor-oil, or a suppository made by coiling up a bit of writing paper, and besmearing it with lard or butter, or by shaping a piece of yellow soap of the size of a large Dutch quill, ought to be had recourse to. Glysters should be seldom employed.—As, according to the Author's experience, they are most hazardous during the first year or two of life, they ought on no account to be administered without the sanction of a regular practitioner.

Nutrition.—The experience of many ages, as well as the arguments which may be adduced from analogy, have proved, to the conviction of every candid inquirer, that MILK is the most natural and wholesome food for infants.—It may be truly affirmed that the attempts which have from time to time been made, to substitute other kinds of food for milk, have furnished many melancholy proofs of the aberrations of the human mind, and have shewn that the powers implanted in the human constitution sometimes overcome even the dangerous effects of inconsiderate prejudice.—But the important advantages which result from nursing, both to the mother and to the infant, have been so often explained, and are so generally understood, that they do not require any illustration on this occasion.

It has been improperly imagined, that all mothers ought to be nurses. By this opinion, many infants have been destroyed, and a greater number have only lived to regret their existence; the weakness of their frames having made them strangers to the comforts of good health.—The luxuries which refinement has introduced in the manner of living, although they do not prevent every woman from being a mother, certainly render many very unfit for the office of a nurse. A delicate woman, involved in the dissipations of high life, and confined to a crowded city, cannot be supposed capable of furnishing milk in due quantity, or of a proper quality. Her infant must either be almost starved, or the deficiencies of his mother's breast must be supplied by unnatural and hurtful food.

Were the bad effects of nursing, where the mother is of a delicate frame, and addicted to the habits of the higher ranks of society, limited to the infant alone, they might be counteracted by the employment of an assistant, who should give suck during the night, and also occasionally throughout the day, a plan which is sometimes found to be most useful. But there can be no doubt that in many individuals, even where apparently there is no extraordinary delicacy of constitution, great debility both of body and mind is occasioned by the drain, as it may be truly termed, of the milk. Emaciation, morning sweatings, excessive thirst, inability to take exercise, and depression of spirits, eventual-

ly terminating in alarming melancholy, not unfrequently are the consequences of attempts at nursing.

It must appear so inconsistent with the usual laws of nature, that mothers should be incapable of nursing their own offspring, that those who have not had an opportunity of witnessing the facts by which alone this question can be determined, may be readily excused for their incredulity.—How many strong arguments, for example, might be adduced in favour of mothers nursing their infants? Instinct which, in the brute creation, is the unerring guide, prompts all our domestic animals to suckle their young.—Again, if a woman can nourish the infant for the first nine months after its conception, she ought surely to be able to continue its nourishment for a few months longer, and her milk ought to be better adapted to the constitution of the infant than that of a stranger, which might communicate various disorders.

Such arguments, together with others founded on appeals to the moral and religious sympathies of parents, have furnished the materials for the popular declamations on this subject, and these have made such an impression upon the public mind in Great Britain at least, that it requires some fortitude to resist the prejudice.—In this instance, however, as in every other, common sense should dictate what ought to be done in every individual case.—Delicate unhealthy women ought never to attempt suckling their infants, unless from their youth, or ex-

treme delicacy, a quick succession of child-bearing might prove injurious, in which case a healthy assistant is to be provided, on whom the whole drudgery of nursing should devolve.

Formerly it was imagined that milk from two different women was hurtful to the constitution of the infant; and yet all analogy militated against such an opinion. The Author can with confidence assert, from not a little experience, that there never was a more ill-founded prejudice. Some of the healthiest young people, of whom he has had charge, were reared in this way, and he never saw the most trifling indisposition in consequence of this plan.

When those in the better ranks are qualified to suckle their own infants, it must be quite obvious that they ought to dedicate their whole attention to the task they have undertaken, and that they should so regulate their employments, their diet, their exercise, and the hours dedicated to rest, as to promote their own health, and at the same time to secure a regular supply of food to the infant. If they cannot make those sacrifices, they ought not to attempt a duty of such importance.

Cautions to be observed while Nursing.—Although those infants are most healthy and thriving who are least restricted, and who are permitted to take the breast at pleasure; yet the woman should avoid becoming the slave of her infant. On this account, it ought never to be allowed to sleep at the

breast, nor accustomed to overload the stomach by sucking till vomiting ensues. A disposition to regularity in the periods of sucking will soon be observed, and ought to be encouraged.

It should always be remembered, that the mode of life most conducive to health will afford the best milk, and the most plentiful supply; and therefore nurses ought never to eat at irregular times, nor in a quantity which the appetite does not demand; and they should guard equally against indulgence in quantities of diluting liquors, such as small beer, porter, ale, gruel, &c. Fatigue, indolence, or inactivity, and every irregularity, must be also avoided.

With the view of introducing a change of diet by degrees, the practice of early beginning to give the infant daily a little pap or panada, appears to be rational; for when it is neglected till the time of weaning approaches, the habit is with difficulty established; and there is great hazard that the sudden change may prove injurious. From ten days to a fortnight after birth, is however the earliest period at which the use of spoon-meat is to be begun. At first, food should be given only once a-day; by degrees it may be increased to two meals; and before weaning, three at least ought to be allowed.

If bad effects follow the use of such apparently harmless materials as bread and water, what must be the consequence of the pernicious custom of giving infants spirits in the form of toddy, with the supposed view of preventing gripes? Such liquors,

however diluted, applied to their tender digestive organs, must unavoidably destroy or impair their functions, and cannot fail to lay the foundation for a train of the most dangerous complaints.—It may indeed be urged in favour of this horrid unnatural practice, that many infants are accustomed to weak toddy from a few days after birth, and that they continue to thrive uninterruptedly. But such arguments only tend to prove that the vigour of constitution in those individuals is so great as to resist the usual effects of strong liquors.

Although panada or pap be now almost universally used for the first food of infants, as a substitute for the mother's milk, yet, in cases of great delicacy of constitution, some more suitable meat may be given with more advantage, such as asses milk, or cow-milk mixed with a little water and sugar, to which a small proportion of rusk biscuit may be added. The arrow-root, or patent sago, prepared with water and milk, is an excellent food for infants; and after two or three months, weak beef or chicken tea may be occasionally given.

Air, Exercise, &c.—If grown persons, who have been many years accustomed to impure air, often feel themselves sick in a crowded room, it must be very evident that a much less degree of bad air will affect infants, whose lungs are weak and irritable. But the infant, where the parents are of the better ranks, ought not, for the first

month, to be exposed to the open air, unless the weather be uncommonly fine, as its tender lungs may be thereby irreparably injured.

When he has acquired so much strength as to be able to withstand exposure in the open air, he should be carried out every good day, at the time the sun has most influence. At first he ought only to be kept without doors for a very short time ; and the person who has charge of him should walk slowly and gently, and avoid standing, especially in a current of air. By degrees, he may be sent abroad twice a-day, when the weather is favourable, and may be kept out gradually for a longer space of time.

The importance of pure air to infants cannot be better illustrated, than by comparing the health of those who are nursed in great towns with that of those reared in the country. “ In the year 1767, in consequence of the humane suggestion of Mr Jonas Hanway, an act of Parliament was passed, obliging the parish-officers of London and Westminster to send their infant poor to be nursed in the country, at proper distances from town. Before this benevolent measure took place, not above *one* in *twenty-four* of the poor children received into the work-houses lived to be a year old ; so that out of two thousand eight hundred, the average annual number admitted, two thousand six hundred and ninety died ; whereas since this measure was adopted, only four hundred and fifty out of the whole number die ; and the greatest part of those deaths

happens during the three weeks that the children are kept in the work-houses *.”

Although certainly other circumstances besides impure air, such as carelessness, &c. must have contributed to this dreadful mortality; yet the superiority of the country air over that of large cities is clearly proved by this fact, and may be confirmed by the meagre looks, sallow complexion, and feeble limbs, of infants reared in town, even where the greatest attention has been paid.

On the proper exercise of infants more depends than superficial observers could imagine; for by inattention to this circumstance, a foundation is often laid for deformities that may destroy the beautiful symmetry bestowed on the human body by the Author of Nature, and may injure the health, and also for diseases which, though their first approaches be slow and gradual, may terminate suddenly in a fatal manner.

During the first week or two after birth, the infant sleeps naturally more than two-thirds of his time; and therefore the fatigue which he undergoes, from being washed, dressed, &c. morning and evening, and occasionally raised to be cleaned during the day and night, may be considered as sufficient exercise at that period.

* Examination of Dr Price's Essay on Population, by the Reverend John Howlett, A. B.

The remarkable delicacy of infants, and the gristly state of their bones, would render any violent agitation of the body for the first weeks highly dangerous ; but in proportion as the infant advances in age, the bones become gradually more complete, and the other solid parts more firm : hence a gentle degree of motion, by promoting the free circulation of the fluids, will be highly beneficial.

Every restriction to one particular position, in whatever situation the infant may be, ought to be constantly guarded against ; for as the softness of the bones renders them easily moulded into an improper shape, deformities, which may destroy the health, or prove the source of much future distress, will, if this caution be not observed, be readily induced. An infant should not therefore be laid always on the same side, nor carried constantly on the same arm.

The use of cradles is not now so universal as formerly ; and it is to be hoped will not again become fashionable. Nature never intended that infants should have exercise during sleep after they have breathed : therefore the idea, that rocking a cradle resembles the motion to which infants have been accustomed when in the womb, is an erroneous one. The young of other animated beings sleep quietly and profoundly for a great part of their time without any rocking, although they also were habituated to a gentle waving motion before birth.

It has been urged, that objections to the employ-

ment of cradles, deduced from the abuses which may attend this practice, are inadmissible. But certainly no prudent person would recommend any unnecessary expedient which may, through inattention, be improperly used.

Infants, for these reasons, ought to sleep in bed from the time of birth, although some inconveniences, and it has been supposed dangers, attend this custom; for it may often perhaps be inconvenient for the mother to carry her infant to the bed-chamber every time he falls asleep; and, during the night, if the woman have been unaccustomed to sleep with a child, there is a risk of her overlaying it.

Every inconvenience may be avoided by adopting a very simple expedient. A crib or cradle may be so constructed, as to be fixed to the side of the bed, during the night, and to be easily moved from one room to another during the day. But in cold weather the infant ought never to be allowed to sleep by itself, as heat is absolutely necessary.—The accident of the infant being overlaid is so uncommon, that the author has never met with a single instance where he could ascertain that the infant was lost from that cause.

Weaning—forms an important æra in the life of an infant, as on the proper regulation of this great revolution in his mode of living his future health often depends.

Although in different countries different practi-

ces with respect to weaning be adopted ; yet it is a rule too obviously proper to require any illustration, never to deprive an infant of the breast if he do not thrive, unless his indisposition seem to originate from the milk.—This, indeed, is not an uncommon occurrence ; for when women give suck too long, a natural change takes place in their system, which deprives the milk of its nourishing qualities.

The time of weaning must be influenced by a variety of circumstances besides the health of the infant, as season of the year, constitution of the parents, period of teething, &c. The winter, for obvious reasons, is a very improper time for this purpose. When the parents have a scrofulous habit, or a feeble constitution, the infant should be nursed by a healthy country woman, and he ought not to be weaned till at least eighteen months old. If the nurse become unfit for her duty before that time, another should be procured. With these exceptions, infants may in general be weaned at any time between nine and twelve months after birth. Too early weaning is a more serious error than protracting the nursing beyond the more ordinary period.

Many errors were in former times committed in the method of weaning. Thus the infant was deprived of the breast at once ; or was, by the application of mustard, or any nauseous substance, to the nipples, made through disgust to desert the breast of his own accord.—This latter is said to be the method now followed in France.

Both practices are equally cruel and improper. A change of diet should be introduced by slow degrees ; and therefore, for some weeks previous to weaning, the infant ought to receive an increased quantity of spoon-meat, and should be allowed a smaller proportion of milk. But unless the latter precaution be attended to, the former practice is not to be adopted.

What is called the *weaning-brash* is a violent bowel complaint, occasioned by a diseased action of the digestive organs, which is the natural consequence of a sudden change of diet.—This may be easily understood, and yet it has been little attended to. If a grown person, whose stomach and bowels are so much more vigorous than those of an infant, were to be all at once forced to live upon Cheshire cheese, it can hardly be doubted that his health would soon suffer in an alarming degree.

When an infant is weaned, it was formerly the custom to give doses of laudanum, or syrup of poppies (which has the same effects), every night for a considerable time, with the plausible view of obviating restlessness. But such medicines are seldom safe or proper. Where restlessness occurs, the infant ought to be taken out of bed, and carried about through an airy room.—The indiscriminate use of laxatives is also a prevalent custom among women, and cannot be condemned in strong enough terms. If the bowels be not sufficiently open, laxatives must be had recourse to ; but otherwise they may do harm.

The infant should be accustomed, when weaned, to receive food or drink at stated periods, and not according to the caprice of nurses. Although this task will at first be somewhat difficult, it can always be accomplished by perseverance; and the benefits which the infant himself and his attendants derive from this circumstance, will more than compensate for the trouble attending the attempt. As little drink or food ought to be given during the night as possible; for a bad habit may be induced, which may lay the foundation for many future complaints. The impropriety of indulging infants with spirits and water has already been explained.

After weaning, the food of infants should consist of weak beef-tea, panada, light pudding, and the various preparations of milk. Rusk biscuit ought generally to be used instead of ordinary bread. The common preparation of oat-meal (called pottage or porridge), till within these few years much used in this part of Great Britain, is in general too difficult of digestion for infants, unless a proportion of barley-meal be mixed with the oat-meal.—Frequent exposure in the open air when the weather is favourable; and an increased degree of exercise, are highly beneficial to newly weaned infants.

SECTION V.

Affections of the Skin, accompanied with Fever.

ERYSIPELATOUS Inflammation sometimes occurs within a few days after birth. It most commonly first appears on the toes or fingers, which look swelled and blueish as if from cold; but sometimes it begins at the belly, or about the shoulder or neck, or at the inside of one or both thighs. When neglected, it spreads extensively, so that in many instances it affects in succession every part of the surface. Suppuration or gangrene are occasionally the consequences, and even where neither of these events take place, death may happen from an effusion into some of the cavities. The most alarming form of the disease is met with in hospital practice.

This disorder is to be distinguished from other affections by the hardness and uniform increased thickening of the inflamed skin. To an experienced practitioner, too, the colour of the affected part furnishes a pretty certain mark of discrimination.

The treatment must be varied according to the degree and the stage of the inflammation. In every instance, repellents, such as preparations of goulard, &c. are most injurious. Even emollient poultices often render the case strictly desperate. If there be any difficulty in ascertaining the true nature of the inflammation, no harm whatever can accrue from dust-

ing with hair-powder or fine flour, and in erysipelas it is at first the only application which can be useful.—The bowels are to be kept very open ; the flow of the urine, if at all scanty (which is not an unfrequent occurrence), is to be promoted, and the strength is to be supported by cordials as well as nourishment; and where these fail, bark in the form of a lavement ought to be exhibited every three or four hours while necessary.—In some cases powerfully stimulant dressings to the affected parts are required, and in other cases blisters upon the chest or back, or other parts remote from the seat of the disease, must be had recourse to.

Another affection of the skin, attended with fever, has been called by Dr Underwood, who first publicly described it, the SKIN-BOUND DISEASE. It occurs chiefly in hospitals and among the lower classes of society, though it has in some rare instances been observed in every rank. It does not happen invariably, as in the former disease, within a short time after birth, for it has been known to attack infants above six months old.

This disease is ushered in with violent fever, coldness of the limbs, oppressed breathing, and almost constant moaning. The general colour of the surface of the body is yellowish, but some parts of the skin are purple, and not only thickened and hardened, but also so evidently unyielding, that they seem to be strongly glued to the subjacent parts. The neck, shoulders, and back, most commonly form

the seat of this affection. This peculiar appearance and condition of some parts of the skin, with the yellowish hue of the rest of it, together with the violence of the fever and the state of the stools, which are of the colour and consistence of clay, enable a practitioner to distinguish this disease from erysipelas, and from every other disorder.

There is some reason to believe that the cause of the *skin-bound disease* is some altered condition of the liver; and in confirmation of this it may be stated, that in one very remarkable case which the Author attended several years ago, where the patient was six months old, the only morbid appearances discovered after death, were an unusual accumulation of blood within the head, and such a change in the texture of the liver that it looked as if it had been boiled.

For the cure of this complaint, the warm bath, powerful laxatives, cordials, and blisters, have been recommended, but they have seldom proved successful, and it is to be feared that human means can avail very little, wherever its progress is not arrested in the beginning.

SECTION VI.

Affections of the Skin unattended with Fever.

COPPER-COLOURED BLOTCHES, of the size of a sixpenny or shilling piece, on the buttocks or soles of the feet, occurring within from a week to a fortnight after birth, indicate a diseased state of the infant's habit, which requires the most serious attention. If they be neglected, ulcerations of the palate, throat, and nostrils, follow; the nurse's nipples, armpits, and throat, become infected; and if the infant (which is not common) survive for any length of time, the arms and legs are covered with an ugly scab, which keeps up a constant degree of irritation.

The only cure for this affection is mercury, which ought to be exhibited, both to the nurse, in such quantity as to affect her milk, and also to the infant, in doses adapted to its strength, and to the virulence of the disease.

Infants are much subject to an eruption called the GUM, which appears in a variety of forms, both in different cases, and in the same individual, at different times. The best description of these varieties is that given by Dr Willan *.—In a work of

* See Dr Willan's Work on Cutaneous Diseases, Order 1.

this kind it would be improper to dwell minutely on this subject, more especially as the several varieties require almost a similar treatment.

Of the five species into which the disease is divided by Dr Willan, the most common is the *red gum*, which usually appears a short time after birth, and occasionally recurs till all the milk-teeth are cut. It is generally in the form of a great many small distinct red slightly elevated spots, which can be felt above the skin; it is often general over the whole body, like the measles; in other cases it appears only on the face, or extremities, and is frequently confined within large patches. The skin in many instances is of a livid red colour in the interval between the spots. The infant does not seem to suffer any uneasiness, or derangement in his usual functions, from this eruption; a circumstance that sufficiently distinguishes it from the measles.

One variety of this disease, the spots being transparent, or of a yellowish or pearly colour, resembles so much the itch, that the principal mark by which it can be distinguished from that disease, is the ordinary attendants not being affected with a similar eruption, though the nurse herself sometimes is. The only danger to be dreaded from the red gum is its sudden repulsion, which is immediately followed by violent affections of the bowels, attended with screamings, and even in some cases with fits.

A determination of blood to the papillæ of the skin seems to be the chief cause of all the varieties

of gum, but the circumstances occasioning this have not yet been ascertained. It can scarcely be doubted, that the structure of an infant's skin is such as to admit readily, whenever the blood is disproportionate to the wants of the system, of a deposition of the superfluous parts on the skin.

In the management of this eruption the chief object ought to be, to guard against its repulsion, for which purpose the bowels are to be kept moderately loose, the skin is to be frequently washed with milk-warm water, and exposure to cold is to be particularly avoided. The nurse's diet, too, is to be properly regulated. Should the eruption by any accident recede, the warm bath, and in some cases an emetic, cordials, and even blisters, must be had recourse to.

MILK-BLOTCHES.—A white or dusky scabby eruption, principally affecting the brow, or some part of the head or face, in many cases appearing in different distinct patches, in others spreading considerably in one continued crust, is termed by nurses Milk-blotches.

These scabs are always superficial; consequently never leave any scar, unless they be improperly treated. They are attended with no fever nor obvious derangement of the system, although they often continue for weeks or months. Eruptions of this kind generally only occur in gross infants, and seem to proceed from too rich milk.—The cure,

therefore, commonly depends on the abstinence of the nurse from much animal food, and from all fermented liquors.

From the anxiety which parents and nurses often express to have those ugly appearances removed, practitioners have been induced to interfere unnecessarily and improperly. It should always be remembered, that such eruptions are frequently critical and salutary ; and therefore, when, from excessive itching, it becomes expedient to apply to them a weak solution of sugar of lead, or, what is preferable, the weak astringent lotion formed by a solution of white vitriol, or the mixture of fine oil and lime-water, prescribed in the Appendix, gentle laxatives are to be premised. Every active medicine, as large doses of calomel, waters impregnated with sulphur, &c. ought, if possible, to be avoided.

An eruption, very similar to the above, occasionally takes place during teething, and is a most obstinate and troublesome complaint, rendering the infant extremely restless, from the heat, itching, and irritation which attends it. Besides the period of attack, there are other circumstances which distinguish this eruption from the former, viz. there being a redness of the skin round the edge of the incrustations ; an ichorous or clear-coloured exudation which concretes, issuing from the surface of the scabs ; and the disease having a tendency to spread

over every part of the face which is touched with that exudation.

The ordinary unctuous applications generally aggravate this affection. The best remedies, therefore, are brisk laxatives, sometimes preparations of sulphur or antimony, and a wash composed of one part of the acetate of ammonia to four parts of spring-water, or tar-water. With either of these the scabs may be washed evening and morning. In some cases poultices with barley meal and buttermilk, and in others the application of the tar-ointment, are necessary. Calomel has been very often employed in this disease, but it has never seemed to have much effect.

SECTION VII.

Yellow Gum.

THIS disease commonly takes place within a few days after birth. It is preceded by drowsiness and disinclination to suck, and is soon discovered by the universal yellowness of the skin. Sometimes the whites of the eyes appear yellow for a day or two before the other symptoms. The tinge of the skin is seldom deep, and the oppression and torpor abate on the infant being well purged ; so that at the distance of a week from the attack, all the indisposition subsides. But cases are occasionally met with.

where the colour of the skin is of a dark yellow, the infant moans constantly, and convulsions follow, which at last destroy life.

The causes of this disease are numerous. As the bile is conveyed from the liver and gall-bladder by a single conduit, into the intestinal canal a little below the stomach, any obstacle which may prevent its passage in this manner must induce a yellowness of the skin. In grown people, the liver is pretty well defended from external injuries ; but in infants it is larger in proportion, and not so well protected. In them also the intestinal canal is more readily deranged than afterwards ; hence the flow of bile may be interrupted by external pressure on the liver, by distention of that portion of the intestine into which the bile passes, or by any of the causes that occasion the same accident in grown persons. It has been alleged that this complaint is sometimes occasioned by the nurse's milk ; but the evidences of this are not quite satisfactory.

In regard to the treatment of this disease, if the infant seem to suffer no uneasiness, although his skin be quite yellow, all that is required is to keep his bowels well-cleared. But if he be unable to suck, and have a disposition to constant sleep, the most active means should be adopted. Ipecacuan vomits, and brisk laxatives, as a dose of jalap, or syrup of senna, or cold-drawn castor-oil, followed up by frequent doses of a solution of manna, will then be found necessary ; and their effects may be much

promoted by the warm bath.—When violent colic pains or convulsions accompany the yellow gum, there is reason to fear that the liver is diseased, and that little can be expected from any remedy.

SECTION VIII.

Sore Mouth or Thrush.

THE THRUSH is so common a disease in early infancy, that it has been imagined to be a salutary effort of Nature to expel some hurtful matter from the system, which might otherwise be productive of many complaints at a future period. This opinion, however, is merely a vulgar prejudice, founded neither on reason nor experience.

Of this disease there are two varieties: the one which is by much the more frequent, is merely a local affection of the lining of the mouth; and the other is a feverish disorder of a very dangerous nature.

The former of these appears in the form of small white spots on the corners of the lips, tongue, and inside of the cheeks and throat, resembling little pieces of coagulated milk. These spots gradually spread over the inside of the lips, the tongue, palate, &c. and, in some cases, are continued as far into the throat as can be seen; but, where the complaint is favourable, the surface not covered with

the spots is of a healthy colour, whereas in violent degrees of the disease it is of a damask rose or very red hue. In three or four days the spots grow yellow, and soon after drop off, and gradually disappear, leaving the skin on which they had been seated of a bright red colour; so that at the end of a fortnight from the first attack, no vestiges of the disease remain.

In some rare cases the spots become livid, and the infant sinks, although no fever had attended. Instances of this kind are exceedingly rare, but it often happens, that, from mismanagement, the complaint is kept up for several weeks, and gradually exhausts the strength of the infant. This is always the effect of forcing off the spots before they have undergone the natural changes: and as they are quite superficial, any slightly stimulating application, such as Port wine and water, currant jelly dissolved in water, or borax (which is universally employed by the ignorant in this part of the island), readily does this.

Considerable acrimony of the saliva attends this disease, so that gripes, frequent unnatural stools, excoriation about the extremity of the gut, and tenderness or soreness of the nurse's nipples, are the usual consequences. Inflammation of the bowels has sometimes been excited by this state of the saliva, and has proved rapidly fatal.—The disease appears generally within a few days after birth, and seldom later than the month.

That the too early or too liberal use of spoon-meat is the most frequent cause of this variety of sore mouth can scarcely be doubted, but other causes occasionally produce it, such as exposure to cold, damp weather, and some peculiar states of the atmosphere. The proof of this latter cause is, that in some seasons almost every infant is affected with some degree of sore mouth.

In the treatment of this complaint, the great object should be, to promote its natural progress, and to counteract the effects of the acrimony of the saliva. This may be done by putting frequently into the infant's mouth a tea-spoonful of a liquor prepared by mixing with the white of a single unboiled egg three table-spoonsful of cold water, and a little refined sugar, by prohibiting all spoon-meat, and by frequently dusting the natural passages with prepared calamine or tutty powder. When the spots become yellow, the borax may be allowed. It is to be mixed with eight or ten times its weight of powdered sugar or of honey, or it may be dissolved in fig-tea in the same proportion.—If the spots grow livid, bark and Port wine should be used as a gargle, while the infant is supported by means of ten or twelve parts of warm cow-milk, mixed with one part of sherry wine. The same kind of nourishment is necessary in cases where, from the extensive incrustation over the tongue and cheeks, the infant is incapable of sucking, which often happens for a day or two. The irritation in the bowels is to be allayed

by means of preparations of any of the ordinary absorbents.

The other variety of thrush is preceded by great oppression or feverishness, sometimes by such lowness as to resemble the approach to death, and sometimes even by fits or violent shrieking. When the spots begin to appear on the inside of the lips, on the tongue, &c. those symptoms become mitigated, but do not entirely subside ; for the infant generally continues feverish and incapable of sucking, till the spots begin to drop off. Great irritation of the bowels attends this affection, insomuch that it has been alleged, on apparently just grounds, that sometimes the spots are continued, at least along the course of the gullet down as far as the stomach.—From the frequent pain in the belly, aggravated by the slightest pressure, it has even been supposed that they extend further.

In every instance, the event of this disease is to be considered as precarious. If the oppression do not go off upon the appearance of the spots, or if the spots become livid when they should grow yellow, there is little chance of recovery. But even where these obvious marks of danger do not take place, there is always risk of the weakness and irritation proving fatal. Till the infant can again suck, there can be no dependence on his recovery.

This variety of thrush has been supposed to be induced by specific contagion. Like the former, it most ordinarily happens within the month after

birth, though exceptions to this more general law now and then occur.

In the treatment of this dangerous disease, the utmost activity of practice is necessary. The absorbent medicines, such as magnesia and prepared chalk, on which many foreign practitioners place the chief reliance for the cure, do no more than moderate the irritation in the stomach and bowels. On this account they are indeed proper auxiliaries, but the great indication to be kept in view is to support the strength of the infant. For this purpose wine mixed with milk, in the proportion already mentioned, and sweetened so as to be palatable, should be freely and frequently given; and one drachm of bark with three drops of laudanum, made into a lavement, by means of two table-spoonsful of thin starch, ought to be exhibited every three or four hours, till the spots begin to drop off, and the infant again become capable of sucking.

During the course of the disease, a clean dress should be put on every twelve hours, and the whole surface ought, at the same time, to be carefully washed with warm water. The mouth is to be treated as in the former variety. If, notwithstanding these means, the strength decline, and the healthy change on the spots do not appear, powerful cordials, with external stimulants, become necessary.

SECTION IX.

Sickness and Vomiting.

TO one who has never witnessed the state of an infant while labouring under SICKNESS at stomach, it is hardly possible to communicate an adequate notion of the alarming appearances which it induces. There is not only a remarkable change of countenance, a general relaxation of all the limbs, a great degree of torpor and lowness, but also an oppression of the breathing, that may be readily mistaken for the approach to death.—The suddenness of the attack, the smell of the breath, the colour of the face round the lips, the dulness of the eyes, and the total incapability of sucking or of swallowing, are the most obvious evidences of this affection.—If there be slight efforts to retch, no one could mistake the case; but it sometimes requires a good deal of attention to discover those efforts, for the infant always resists them as long as possible.

The causes of sickness at stomach in infants are either some altered condition of the nurse's milk, or the presence of some indigestible substance in the stomach.—If the nurse have been under the influence of any violent emotion of the mind, or if she have begun to be out of order, or even to have the feelings preceding that event, it may with certainty be concluded that there is some morbid change in

the milk. During the process of teething, the increased quantity of saliva, together with its acrimony, prove occasionally the cause of sickness.

In such cases an emetic is immediately to be given; and preparations of ipecacuanha are in general the only medicines to be employed. Antimonials, in doses which excite vomiting, are always hazardous, for they sometimes actually exhaust with great rapidity, the living powers. In many instances, the infant has remained in a torpid lifeless state for twelve or fourteen hours after an ordinary dose of emetic tartar, and, as far as could be judged, nothing but the most powerful cordials and external stimulants could have prevented the fatal event.—The ipecacuanha, therefore, either in the form of powder, mixed with a little sugar and water, or of ipecacuan wine, is the most safe and efficacious emetic. For the first month after birth the powder is to be used; the dose should be from three to five grains; after that age, the ipecacuan wine, being more readily swallowed, is often the preferable form.

VOMITING is a very common occurrence in infants, as their stomach is so irritable that it readily rejects any overload, or any indigestible substance. Unless when it is extremely violent or long-continued, it is seldom necessary to interfere; but when means are required to moderate or to allay it, they must be adapted to the cause of vomiting.—If it seem to arise from the presence of something in the stomach

which ought to be thrown off, there can be no doubt of the propriety of an emetic.—When it is kept up by the irritation of the stomach, which is sometimes the consequence of its actions having been disturbed by a cause already removed, cordials, and, failing these, stimulants applied externally, ought to be recommended. The great difficulty is to distinguish the cases in which the one or the other practice ought to be adopted. When the vomiting recurs frequently without any apparent cause, some serious organic affection may be dreaded.

The habitual vomiting from over-distention of the stomach, to which many infants are liable, may lay the foundation for future weakness of the digestive organs, and should therefore be guarded against by every precaution. For this reason, infants ought not to be permitted to suck too much at a time ; and large quantities of spoon-meat should never be given in the early months. The intention of spoon-meat at that period is not to appease hunger, but to accustom the infant to a gradual change of diet. A small proportion only, therefore, ought to be allowed, till towards the period of weaning ; and although it must necessarily be given when the infant is hungry, to induce him to take it, his appetite should never be completely satiated.

SECTION X.

Colic Pains and Introsusception.

IF an infant be fretful by fits, if its upper lip look bluish or livid, if it writhe or contort its body, and draw up its limbs towards its stomach, and, more especially, if it occasionally pass wind, which seems to afford relief, there is good reason to suppose it affected with COLIC.—The lesser degrees of this complaint are of temporary duration, and are so well understood by the ordinary attendants, that a medical practitioner is seldom consulted for any other purpose than that of preventing its frequent recurrence. But the more violent degrees of colic assume an appearance which seldom fails to occasion much anxiety and alarm. Excessive and long-continued shrieking, great fever, indicated by the heat of the skin and flushing of the face, oppressed breathing during the intervals of the screamings, and the evidence of pain being occasioned by the slightest pressure on the belly, are the ordinary symptoms in such cases.

Such is the delicacy of the bowels of infants, that they are apt to be affected by the most apparently trifling causes; and hence many circumstances induce colic-pains. Exposure to cold, inattention to changing the clothes when they become wet, too great a quantity of spoon-meat, some fault in the

milk, too large doses of magnesia, and a collection of acid slime or of air in the stomach or bowels, may severally be productive of this complaint.

Of those causes the two latter only require elucidation. As magnesia has little taste, it has been supposed incapable of occasioning any irritation. But its laxative effect depends on its undergoing a change in the stomach or bowels, which gives it the same properties as the laxative salts; and, it is obvious, that if too large a dose of these occasion flatulent colic in grown persons, the magnesia must, when given in too great quantity, produce the same effects in infants.

The internal surface of the stomach and alimentary canal is constantly lubricated with slimy fluids, which defend it from injuries, and, when in due quantity, assist in the digestion of the food.—But when the proportion of those lubricating fluids is too great, the food is prevented from undergoing the healthy changes, and indigestion, with all its consequences, must follow.—Nothing contributes more to increase the quantity of slimy fluids than too much sugar in the food of infants.—A little of that substance is proper and necessary, but it ought never to render the spoon-meat what can be termed sweet. Inattention to this is one of the most common causes of green-coloured sour-smelling stools.

In slight degrees of colic, a few drops of Dalby's Carminative, mixed with sugar and water, and a dose of cold-drawn castor-oil, if the bowels be at all con-

finer, are all that are necessary.—The practice of giving spirits and water to infants, which was formerly so prevalent, cannot be reprobated in sufficiently strong terms. It consists with the knowledge of the Author of these observations, that in the lower ranks many infants are annually destroyed in this city by this most unnatural practice; and from what he has seen, he takes the liberty to warn parents in the higher walks of society, that dry nurses very often have recourse to this method of quieting infants, for their own selfish purposes.

The best method of preventing slight degrees of colic, is to take care that the infant do not suck too much at a time; to promote the discharge of any air that may be swallowed while sucking, by gently tossing the baby now and then before his stomach be filled; to proportion the quantity of spoon-meat to the powers of digestion; and to regulate the diet of the nurse; as it is now well known, that, after certain articles of food, such as particular kinds of malt-liquor and of vegetables, a great deal more air than usual is separated during digestion from the milk.

In the more violent degrees of colic, the treatment must be varied according to the circumstances of the individual case. If it seem to arise from accumulated slime, or from some fault in the milk, suitable doses of cold-drawn castor-oil, or magnesia and rhubarb, together with the warm bath or fomentations of the belly, are to be advised. But if the

bowels be quite open, and the complaint have been evidently excited by exposure to cold, or some external circumstance, along with the latter of those means, opiates, in the form of anodyne balsam, rubbed on the belly, may be safely prescribed. Preparations of opium should almost never be given internally to infants, as they may do, and have done, irreparable mischief. The tincture of hyoscyamus is a most excellent substitute.

When constipation attends colic, the most active means of opening the bowels are to be had recourse to, provided there be no evidence of any inflammatory affection, for in that case purgatives are highly injurious.—Preparations of aloës, of senna, of castor-oil, of the compound extract of colocynth, combined with James's Powder, together with emollient glysters, are to be employed according to circumstances.

A very dangerous disease, called by surgeons INTROSUSCEPTION, resembles colic so much, that it sometimes requires great practical discernment to draw the line of distinction between the two diseases. If, along with the ordinary symptoms of very violent colic, the pulse be unnaturally slow, or if there be urgent calls to void the stools, and nothing but slime, or slime tinged with blood, be passed, there is much reason to dread the existence of this disease.

It consists of the passage or invagination of one portion of the gut into another, just like a pocket telescope, when its several pieces are included in

each other, together with a stricture and consequent inflammation in the introsuscepted portion. Sometimes these are such as to close the canal, but in other cases there remains a free passage through the gut.—Introsusception is occasioned by some violent irritation of a part of the gut, and this is excited by exposure to cold, by worms, and by drastic purgatives.

When this disease is discovered at the beginning, it often yields to the use of leeches, warm fomentations, and a dose of some powerful opening medicine. But if its nature be overlooked or misunderstood, even for a few hours, the fatal event can hardly be prevented. A discharge of blood from the bowels, but more often stupor and occasional convulsions, precede death.

SECTION XI.

Costiveness.

SOME infants seem habitually COSTIVE ; and certainly there is, in respect to the state of the bowels, a considerable variety in different individuals. But what may be properly termed Costiveness, is never to be regarded as a natural deviation peculiar to any infant. It is always the effect of disease, or of the nurse's milk, or of the food. If one copious evacuation take place every twenty-four hours, and the in-

fant be thriving, there is no occasion for interference. If there be any greater torpor of the bowels than this, suitable remedies are to be employed.

It is generally proper to treat the case at first as if it were the consequence of disease; and, on this account, a brisk laxative medicine is to be given every day for four or five times successively. The best laxatives for infants are, manna, calcined magnesia, jalap, cold-drawn castor-oil, and a laxative syrup, prepared in the following manner: Take one ounce of senna leaves, and after having with great care picked out every bit of stalk, pour upon the leaves one English pint of boiling water; let this boil till one half remains, then pour the whole into a porcelain basin, and, covering it up, lay it aside for twenty-four hours. Strain it off through a linen rag, and, adding four ounces of treacle, put it over a fire till it become so much heated that the treacle and the decoction may be thoroughly united. When cold, it is to be corked up for use, and should be kept in a cool place, otherwise it may ferment. The dose of this syrup is from a tea to a table spoonful, according to the age and constitution of the infant. Its activity may be increased to any necessary degree, by the addition of powdered jalap.

Where these means fail, there is reason to attribute the costiveness to the nurse's milk. Of this cause, in many instances, the most incontrovertible proofs have appeared; and, however unnatural it may seem, there can be no doubt that the mother's milk

occasionally has this effect. Sometimes that peculiar state of the milk may be altered by regulating the diet, and opening freely the bowels of the nurse. While proper means are tried for this purpose, the infant's bowels are to be kept clear by any mild laxative. But if it be found that the milk still possesses that injurious quality, the nurse should, if possible, be changed. Where this cannot be done, four or five drops of antimonial wine may be given to the infant every night at bed-time; and, instead of the ordinary food, panada, made with small beer and treacle, should be substituted.

Temporary costiveness may be at any time removed by a suppository made of a small piece of yellow soap, shaped like a very large Dutch writing quill. This may be rendered more powerful, if necessary, by being dipt, previous to use, into some powdered sea-salt. Suppositories are more efficacious in infants, and much more easily managed, than glysters, though these latter means are also sometimes useful.

In cases of obstinate constipation, attended with symptoms of great oppression, aloës, suspended in treacle or syrup, is more powerful than any other laxative; from four to eight grains may be thus given as a dose. Many practitioners err, by directing too small doses of laxative medicines for infants.

SECTION XII.

Looseness.

THE natural appearance of the stools of infants, while on the breast, ought to be familiar to every practitioner. In general, the colour is that of bright orange, the consistence is pulpy and curdled, and the smell is not offensive. Any deviation, in those respects, marks some diseased state of the stomach or bowels. During infancy, from two to four evacuations, within the twenty-four hours, seem necessary and useful; and even where that number is exceeded, it is not to be regarded as injurious, unless the health be impaired, or the flesh be rendered flabby.

In cases of looseness, the appearance of the stools is very various; for they are of a light-green colour, or slimy, or bloody, or dark-coloured and watery, or light clay-coloured, or of a dark-green, like chopped spinage, or purulent, or they consist of the food totally unchanged.

When they are light green, and at the same time emit a sour smell, the infant is said to have the *green scour*. This complaint is attended with griping and fretfulness, but is not dangerous. It commonly yields to a brisk laxative, as a dose of rhubarb and magnesia, or of syrup of senna with a small

proportion of rhubarb, followed by small doses of magnesia or prepared chalk. The nurse's diet should be regulated, and the infant ought to have no other food besides the milk than arrow-root.

Slimy stools are generally the effect of exposure to cold, though they occasionally arise from some irritation or accumulation in the bowels. In both cases they are apt to be slightly streaked with blood. If there be violent pain, or symptoms of fever, introsusception is to be dreaded. A dose of cold-drawn castor oil, together with the warm bath, or fomentation of the belly with flannels wrung out of hot water, are the most proper remedies, if the disease be attended to at the beginning. If there be reason to suppose the stomach loaded with acrid saliva, an emetic should be premised.

Dark-coloured liquid stools like moss-water, called in England the *watery gripes*, very rapidly occasion emaciation and prostration of strength, and require very serious attention. This variety of looseness often attends teething, and is also not unfrequently occasioned by depraved quality of the nurse's milk, or by some error in the ordinary management of the infant. The means of cure must be varied according to the causes ; but, in general, an ipecacuan vomit, one or more doses of some mild laxative, with an opiate glyster at bed-time for three or four times, attention to the state of the teeth, warm clothing, a

change of milk, if the infant be still on the breast, and, if otherwise, a due regulation of the diet, are the chief means which are found useful.

The discharge of clay-coloured stools, as if powdered chalk were mixed with them, having a most offensive smell, may be included under this head, although the stools be rather consistent than loose, because they are passed in great quantity relatively to the food taken in, and because they very quickly reduce the flesh and strength. This variety is a very dangerous one ; and if it do not yield in the course of a few days to the use of alteratives, with opiate friction, occasional purgatives, and a suitable regulation of the diet, it eventually proves fatal.

Dark-green coloured stools, like chopped spinage, most commonly are passed during the progress of some acute disease, and always indicate great danger, unless on some rare occasions when they prove critical.—This species of looseness requires a still greater variety of treatment than the former ; because it is often dependent on, or complicated with, affections of other parts. Preparations of rhubarb and aloës, with occasional opiate glysters, are, in most cases, useful remedies.

Purulent matter is occasionally observed in the stools in some cases of protracted looseness, and in most instances the infant suffers unusual pain in passing such stools. In a great proportion of cases of

this kind, little benefit accrues from medicine, but now and then large doses of a solution of gum-arabic mixed with milk, opiate glysters, and small doses of the cold-drawn castor-oil, have been found efficacious.

When the food passes unchanged through the bowels, it indicates great weakness of the habit, and may be generally regarded as the harbinger of death. But in some particular constitutions, exposure to cold, or the irritation of teething, or the weakness which follows febrile complaints, occasion this state of the stools. Such cases are distinguished from the former, principally by the state of the general health, and are to be regarded as arising chiefly from some temporary weakness of the alimentary canal. The obvious remedies for those latter cases are, medicines calculated to stimulate the various parts concerned in digestion, with suitable diet.

In the above enumeration, the chief varieties of looseness have been noticed, but complications occasionally occur, and sometimes one variety is succeeded by another. It may be proper, therefore, to add some observations on the symptoms which indicate danger, on the most ordinary causes, and on the general mode of treatment of such affections of the bowels.

First, Symptoms of danger in cases of Loose-

ness.—Constant peevishness of temper, with an altered appearance of the countenance, a kind of uneasiness of breathing, as if there were a slight tendency to cough, dryness of the skin, with such emaciation that the skin about the thighs seems to hang in folds, swelling of the glands of the groin, and distention or great shrinking of the belly, are always to be regarded as most unfavourable symptoms.—Excessive loathing of food, or great voracity of appetite, are equally dangerous.

Secondly, Causes of Looseness.—When active treatment at the beginning does not arrest the progress of looseness, there is always reason to dread a diseased state of some of the parts concerned in digestion, such as the liver, or some portion of the intestines, or the mesenteric glands.—But it cannot be doubted that an irregular action of the stomach or bowels sometimes occasions very similar symptoms, and it is extremely difficult in any individual case to distinguish at first the one cause from the other.

Thirdly, General method of treatment in cases of Looseness.—In all doubtful cases, it is perhaps the prudent plan to employ such remedies as are calculated to alter irregular action, and to relieve the distressing symptoms as they arise ; for where the looseness is the effect of some organic disease its cure is beyond human reach.

It is impossible to lay down precise rules applicable to the management of every individual case.—But, in general, emetics ought to be first given, and then one or more doses of rhubarb and magnesia, or of cold-drawn castor-oil; and, if the complaint still continue, prepared chalk, in suitable doses, and opiate frictions, or, according to the violence of the disease, very small doses of calomel, with two or three drops of laudanum with each dose, are to be advised. The occasional exhibition of injections of thin starch and laudanum, in the proportion of ten drops of the latter to two table-spoonsful of the former, must be had recourse to, in order to moderate the discharge when the strength is much reduced.

Although powerful astringent medicines are commonly inadmissible in cases of purging during infancy, great benefit has sometimes seemed to accrue from the use of a mixture composed of twenty grains of toasted rhubarb, two drachms of prepared chalk, a table-spoonful of brandy, previously set fire to and allowed to burn as long as any spirit remains, and three table-spoonsful of water. The dose is from one to two tea-spoonsful every hour or two, while awake.—On some occasions, stimulating embrocations, applied over the whole belly, have also had considerable efficacy.—Weak beef-tea, or chicken-broth with rice, or boiled cows-milk with baked flour or with arrow-root, should form part of the diet.

SECTION XIII.

Teething.

THE process of TEETHING does not commence invariably at the same age ; but, in the greater number of cases, the first pair of milk-teeth appear before the seventh month, and the last pair before the completion of the second year. Of those teeth there are twenty in all, that is, ten, or five pair, in each jaw. At birth they are placed underneath the gums, and each tooth is inclosed in a fine membrane or capsule, which is supposed to be extremely sensible. This capsule, as well as the gum, must give way before the tooth can be protruded; and this is accomplished merely by the pressure of the enlarging tooth, which occasions the absorption of those parts.

In general, the teeth appear in pairs, and those of the lower jaw are commonly cut before the corresponding ones in the upper.—The following is the order of succession in most instances, viz. *first*, the two middle fore-teeth ; *secondly*, the two next to them ; *thirdly*, the anterior grinders ; *fourthly*, the eye-teeth ; and, *finally*, the posterior grinders. An interval of one, two, or more weeks, is interposed between each successive pair. There is commonly a longer interval between the first two pairs than between the succeeding ones.

There is great variety in different individuals

in regard to the commencement and progress of dentition. Many infants attain the sixteenth or eighteenth month before a single pair appears, while in some the first pair or two are cut by the end of the third month. Sometimes the several pairs of the upper jaw are protruded before the corresponding ones of the lower jaw. In some rare cases, the grinders come out before the cutting teeth, and the usual order of succession is deranged. It is not uncommon, too, for several pairs to succeed each other very rapidly, and then for a considerable interval to elapse before the rest advance. But, in general, the later the commencement of teething, the shorter are the intervals between the several pairs.

In by far the greater number of instances, the natural process of dentition is productive of pain and indisposition.—Some infants, indeed, suffer less than others, but few enjoy perfect health while teething.

Most commonly the pressure of the teeth on the gums occasions pain and an increased flow of the fluids furnished by the mouth ; hence the infant is fretful, restless during the night, frequently thrusts his little hands, or whatever he can get hold of, into his mouth to rub his gums, slavers continually, and, from the passage of some of the saliva into the stomach and bowels, has occasionally sickness, gripes, and looseness. At last the corner of a tooth is perceived ; but the uneasiness still continues for some days, when a second one is cut.—During the inter-

val between the eruption of the corresponding pairs of the lower and upper jaw, he recovers his strength and usual good health ; but is soon again subjected to the same uneasiness.

Were these the only complaints which attend teething, little danger might be apprehended ; but sometimes many very formidable symptoms occur. In robust healthy constitutions, a violent fever frequently precedes the appearance of every tooth ; the gums are swelled and inflamed, the eyes much affected, the belly bound, the skin hot ; the sleep is short and disturbed, and there is every now and then most incessant screaming, with inability to suck.—Weakly infants, where teething is painful and difficult, are oppressed with sickness, loathe all kinds of food, lose their colour, fret perpetually, have a constant looseness, and become quite emaciated.—Some, besides these symptoms, are subject to convulsions, or to a spasmodic affection of the windpipe, similar to croup, which sometimes ends in a convulsive fit, and sometimes produces instant suffocation, and which is apt to recur from time to time, till the tooth or teeth are above the gum.—Cough, very ugly eruptions on the skin, ulcerations in the gums, extending sometimes over the palate, obstinate inflammation of the eyes, affections of the urinary organs, and sometimes most alarming determination to the head, are occasionally the effects of teething.—All the symptoms are much aggravated, if several teeth be cut at once, or in immediate succession.

By a careful examination of the state of the gums, it may be readily ascertained when any of the distressing symptoms thus enumerated arise from dentition.—Previous to the protrusion of any tooth, the seam, which may be distinctly observed on the anterior edge of each gum, like a doubling of the skin, is done away, and the upper surface of the gum is rendered flat and broad, or is elevated in the form of a small swelling. The gum of the upper jaw is more apt to seem on the stretch than that of the lower.—It is not easy to distinguish when the infant suffers pain from any part of the gum being pressed upon, otherwise that might assist in pointing out the advance of some particular tooth or teeth, because such a degree of fretfulness attends teething, that any attempt to feel the state of the mouth never fails to irritate the baby.

An estimate of the danger attending dentition is to be formed, chiefly from the nature of the symptoms. Experience proves that puny delicate infants often suffer less than the most healthy and robust. In this climate it has been found that summer is a more favourable season for teething than winter. Some infants cut their fore-teeth without any pain or difficulty, but are much distressed while cutting the grinders or eye-teeth.—Although, when the protrusion of the first two pairs of fore-teeth is accompanied or preceded by great uneasiness, there is reason to fear that the individual will suffer during the whole period of teething; yet the converse of the



proposition does not hold good ; that is, where little derangement of health attends the first pair or two, it is not to be concluded that all the other teeth are to advance with the same facility.—It is well known that, during teething, every acute disease is more than usually dangerous ; and it is also a well-established fact, that infants, in a crowded city, are more liable to pain and alarming symptoms at that time of life than those reared in the country.

The treatment of the ordinary complaints attending teething should consist in moderating the pain, in regulating the state of the belly, and in the continued employment of every means calculated to promote the general health of the infant.—With these views, small quantities of anodyne balsam should be rubbed on the back-bone at bed-time, when the infant seems greatly pained. He ought to be fed with beef-tea twice a-day if weakly, and if his bowels be very loose ; and should be kept as much as possible in the open air, when the weather is favourable. The cold bath ought never to be laid aside in these cases, as nothing is more conducive to promote general health. Looseness, if excessive, must be moderated, and if the belly be bound, should be artificially induced by gentle laxative medicines.

When restless during the night the infant should be taken out of bed and carried about in a cool airy room ; and, if not relieved in a short time, he ought to be put into the warm bath.—Finally, he should

be allowed something to rub his gums with, which will both gratify his wishes, and tend to promote the absorption of the parts inclosing the tooth. A piece of wax-candle, or of recent liquorice root, is preferable to coral, though that latter substance is in no other respect injurious than that it may be, by awkwardness, forced into the nostril or eye.—A bone or ivory ring answers the purpose admirably.

The management, when alarming symptoms take place, must be varied according to circumstances; but, in every case of suffering from teething, the indications to be fulfilled are, to cut asunder the parts which resist the protrusion of the tooth, or teeth, and to palliate distressing or troublesome complaints.

As to the former of those indications, many prejudices have prevailed, not merely among parents, but also among medical practitioners.—Of these only three require a formal refutation, viz. the injury that may arise from a scar on the gums, the risk of fatal bleeding from the divided parts, and the probability that the second set of teeth may be placed unequally or irregularly.

The first of these, that the scar, which forms when the teeth do not immediately advance after the operation, will increase the resistance to their eventual exit, is perfectly ideal, for no scar forms on the gum.—When the capsule inclosing the teeth has been fairly divided, it cannot reunite, so that one chief cause of pain and irritation is thereby removed,

As no thickening follows the healing of the gum, the operation may be repeatedly performed over the same tooth or teeth, without any bad effect.

Excessive bleeding from the gums, which might debilitate greatly, or might even prove fatal, has been often urged as a strong objection against dividing the gums. One instance of this consequence of the operation has been reported to the Author, on evidence which he cannot controvert. But as he has now directed and witnessed the division of the gums in some thousand cases, and has never known such an occurrence, he must think the chance of its ever happening beyond all calculation. In general, the discharge of blood, after the incision, is less than could be wished, as, were it copious, it would tend to remove local swelling and inflammation.

The third argument usually stated against dividing the gums, that the beauty or regularity of the second set of teeth are apt to be spoiled, would be the most serious one, were it well founded. But this allegation cannot have originated from fair reasoning on the subject, and it is by no means warranted by observation. As the second set are placed underneath the milk-teeth, it is impossible that the incision of the parts above those latter can affect them ; and experience has unequivocally proven, that the operation has no influence whatever on the condition of the second set.

From mere analogy, the utility of dividing the gums, when on the stretch, might be estimated.

—What remedy could so effectually remove a swelling and inflammation produced by a thorn in the flesh, as extracting the thorn? But it is unnecessary to offer any extended reasoning on a subject which is now ascertained by experience. Not only are the painful feelings relieved by the operation, but even convulsions, which had resisted every possible mode of treatment, have been known to cease from the moment that it was performed.

The operation of lancing the gums is therefore to be regarded as indispensable, in every instance where pain or distress accompany dentition.

Though a very simple operation, the division of the gums above the protruding tooth or teeth has often been bungled. The object being, to cut through both the gum and the capsule which contains the tooth, a proper strong gum-lancet is to be used:—this is particularly necessary in the case of the grinders, for if a single fibre remain undivided, the irritation continues.

Smart symptomatic fever, violent determination of blood to the head, emaciation and looseness, or deranged state of the bowels, are the most ordinary distressing or troublesome symptoms which require palliation.—If the feverishness be not moderated by the operation of cutting the gums, the use of the warm bath, the exhibition of a brisk purgative, and the application of one or two leeches, according to the strength of the infant, or the urgency of the case,

must be ordered, and the bleeding ought to be encouraged for some time. If the bleeding continue too long, it is best stopped by pressure steadily applied for several minutes to the bites. On this account leeches should seldom be fixed on any part of infants which does not admit of being pressed upon by a linen compress or roller. But if the bleeding part cannot be thus compressed, the bites are to be touched with lunar caustic, or the sulphate of copper, vulgarly called the *blue stone*.

Where symptoms of great determination to the head have occurred, the same means, with the addition of a blister to the nape of the neck, are to be had recourse to. Under such circumstances, the ordinary doses of purgatives seem to have little effect, and hence it becomes necessary not only to give very large quantities, but also to repeat them frequently.

Emaciation is usually the effect of excessive looseness, and can only be arrested by most particular attention to the state of the bowels. Opiates, combined with very minute proportions of calomel, are sometimes of great utility in such cases. If the infant have been weaned previous to the illness, his nourishment should consist principally of asses milk, weak beef-tea with rice, and arrow-root prepared with a considerable proportion of boiled milk.—When costiveness occurs during teething, varied purgatives, in considerable doses, are required. It is often a good precautionary measure to premise such a dose of calomel and jalap as shall both vomit and purge.

Inflammation of the eyes sometimes continues even after several teeth are cut.—In such cases the eyes are to be frequently bathed with warm milk and water, the bowels are to be kept very open, and a Burgundy pitch-plaster is to be applied between the shoulders, and should be renewed every eight or ten days.—This plaster is of material benefit where slight cough attends.

The most formidable symptom except convulsions, which occurs during dentition, remains to be noticed: It is a kind of convulsive stricture of the upper part of the windpipe, producing a peculiar crowing sound, as if from threatening suffocation. This affection is quite momentary, and generally happens on awakening from sleep, on taking drink or food, or on the infant being teased or irritated. Sometimes the fits are redoubled, but more often they are single. The disease is unaccompanied by fever, or any material derangement of the general health. When cough attends, which is not always the case, it is not hoarse, and the breathing during the intervals is perfectly free. Those circumstances distinguish it from the croup, which it resembles in the crowing sound.

This complaint, it is believed, was first particularly described in the former editions of this work; and although the Author had seen between thirty and forty cases of the disease, he was led to suppose it rather an uncommon occurrence, from the total silence of practical writers, and from its being quite unknown to the several medical men, with whom he

met in consultation in the above cases.—He is now convinced, however, from additional experience, that it is one of the most frequent of the alarming symptoms which attend dentition, and he attributes its having been hitherto overlooked by the profession, partly to its momentary duration, partly to its resemblance to the croup, and partly to the suddenness of its fatal termination.

It has appeared in the most robust as well as the most delicate infants, and it sometimes continues for months, occasionally decreasing in violence, and suddenly again becoming aggravated, so that for a week or two, the infant shall have forty or fifty attacks within the twenty-four hours, and then the number shall be diminished to eight or ten. The event to be dreaded is sudden suffocation, or a severe convulsion, from which the infant cannot be recovered. In several cases, this has happened at the distance of many months from the first attack, and after the infant had seemed almost completely relieved from the disease. When the Author's attention was first directed to this unaccountable affection (for the appearances after death have not at all elucidated its nature), he believed it was peculiar to the period of cutting the deciduous teeth ; but he is now convinced that it may continue beyond that time, though he has seen no fatal event happen under such circumstances.

For the successful treatment of this complaint, the utmost attention on the part of the practitioner

is required, as no reliance is to be placed on any apparent remission or mitigation of the characteristic symptoms; for so long as these continue to recur in any degree whatever, till all the milk-teeth be protruded, danger is to be apprehended. The plan of cure which has hitherto seemed most successful, has been, to watch the state of the gums, so as never to allow much local irritation from the pressure of the tooth; to open the bowels very freely by means of varied purgatives, with which absorbents or antacid medicines are combined; to regulate the diet; to direct some stimulant substance to be rubbed every six hours on the outside of the throat, and to give frequently some antispasmodic. After having tried the effects of preparations of opium, of hyoscyamus, of valerian, and of assafœtida, without any apparent benefit, Dalby's Carminative, in doses repeated every four or five hours, or oftener, according to the urgency of the case, has appeared preferable to every other medicine.—Blisters on the throat or breast are to be used as auxiliaries; and the warm bath, and preparations of antimony, and even of foxglove, are to be occasionally advised, for the purpose of palliating symptoms. Change of air has in several cases appeared to have an almost immediate effect in arresting the progress of the disease, but in all such cases the healthy action of the bowels had been previously restored.

SECTION XIV.

Catarrhal Fever.

THE common Catarrhal Fever seldom requires any other treatment than an emetic at the beginning, an open state of the bowels, and the warm bath every night while it continues.—But there is a variety of catarrhal fever frequently met with during the severity of winter, which is of a very alarming nature.

It begins with cough and fever, and, soon after, excessive frequency and shortness of breathing suddenly take place. There is neither wheezing nor crowing, nor any apparent obstruction in the wind-pipe; the pulse is so frequent and small that it cannot be numbered; the heat of the skin is perceptibly increased, and, in robust infants, the colour of the countenance is rather more than usually red. In others, however, there is an apparent shrinking of the features. At any rate, the face is seldom purple or flushed.

The infant seems so much pained on coughing, and on being handled, as to render it more than probable that there is at least a tendency to inflammation of the lungs, or of the parts within the chest.

For the treatment of this violent disease the most active means are required, and, therefore, at the commencement, one or more leeches, according to

the age of the infant, are to be applied to the foot, and such a purgative should be given as shall secure the discharge of several watery stools, while preparations of hyoscyamus, or some similar medicine, are to be prescribed for the purpose of allaying the cough.

Should these means prove ineffectual, or should the early stage of the disease be neglected, a large blister must be applied on the breast, and even the tincture of foxglove must be had recourse to. If the cough continue after the inflammatory symptoms have abated, emetics will be found highly beneficial. After the violence of the disease has been conquered, great debility is apt to follow, and hence wine-whey and other cordials should then be prescribed.

When the first edition of this work was published (fourteen years ago), the Author felt it incumbent upon him to express in strong language his objections to the indiscriminate employment of bleeding in this and other acute diseases of infancy, and he has much satisfaction in acknowledging that an important improvement in this respect has for the last seven or eight years taken place, at least in this part of the world.—While there can be no doubt of the great utility of a prudent subtraction of blood in the early stage of this disease, reason would suggest what experience has often too sadly evinced, that bleeding, after a certain progress, has a direct tendency to sink the living powers, and consequently to accelerate the fatal event.

In neglected or mismanaged cases, therefore, the great objects in the treatment ought to be to support the strength, and to excite such a determination to the surface as may relieve the lungs.—The former of these is to be accomplished by suitable cordials, viz. wine and milk, and the aromatic spirit of ammonia, or the spirit of nitrous æther, properly diluted with syrup and water.—A large dose of the tincture of hyoscyamus is to be given evening and morning, for the purpose both of supporting the strength, and of allaying the irritation in the lungs. Preparations of opium are only useful where this affection supervenes to the measles, which it sometimes does.—The latter indication is best fulfilled by the application of blisters and other external stimulants, particularly amber oil, rubbed over the sides of the chest every six or eight hours.—Along with these means, gentle doses of laxative medicines to produce daily two or three evacuations are to be given.

SECTION XV.

Cow-Pox.

It is now unnecessary to state any arguments in proof of the cow-pox being a certain preventive of the small-pox, and still less can it be required that a formal detail should be offered, of the important benefits which must result to mankind from the

JENNERIAN discovery. But there are two circumstances which frequently perplex anxious parents, and which it may therefore be proper to notice in this work.

The first relates to the evidence of the cow-pox having affected the constitution, or, in popular language, being genuine. This, it must be admitted, is a subject of the utmost importance, as there can be no doubt, that many individuals who have been vaccinated have afterwards been infected with small-pox. Advantage has been taken of such cases, by those whom selfish considerations have led to decry vaccination ; and the difficulty of distinguishing, in many instances, the true from the spurious cow-pox, or that constitutional affection which secures the individual against the contagion of the small-pox, from that local disease of the arm which follows the puncture of a lancet charged with vaccine matter, is certainly the only plausible argument which can be urged against the practice.

That a minute attention to the progress of the disease may enable an intelligent practitioner to determine this point may be true, without being satisfactory to every parent ; for all practitioners cannot be supposed equally attentive and intelligent.—It may, indeed, be truly affirmed, that if inoculation for the cow-pox were confined to intelligent and attentive practitioners, it would be of great importance to society ; for much mischief has certainly accrued

from the indiscriminate introduction and encouragement of the practice.

Happily for mankind, a true test has been found out, not by chance, as the original discovery was made, but by rational induction from analogy. Mr Bryce, surgeon here, recollecting that, in the inoculation for small-pox, experiments had been instituted, by which it had been ascertained that punctures, made every day till the fever induced by the first operation began, advanced so quickly in their progress from that period, as to be all in the same state of maturity within twenty-four hours from the occurrence of the fever, concluded that the same must happen in cow-pox, whenever the constitutional affection takes place. This theory he put to the test of experience, and found it completely confirmed. The result of his varied and extensive observations on the subject has been, that when the second vaccination is performed, at the end of the fifth, or beginning of the sixth day, if the first advance in the regular manner, the progress of both goes on equally from the eighth or ninth day, the one being the miniature representation of the other, provided the constitutional affection have actually occurred,—but that if the first puncture fail the second advances, as the first should have done. In that case, a third is to be made at the end of the fifth day, or between thirty-six and forty-eight hours before the expected appearance of the areola of the puncture which has taken effect, and so on till the two vaccinations of the dif-

ferent periods correspond regularly in progress and decline *.

This is not a negative proof, like all the others hitherto proposed; for if the second puncture take effect, it is quite conclusive evidence, that the constitution is under the influence of the cow-pox; and as the virus is to be employed while in the highest state of activity, and is to be immediately transferred from the one arm into the other, it is scarcely possible for it to fail, unless the operator be very awkward or very careless. The value of this discovery, which ascertains a point of such importance, can only be appreciated by those who can judge of the subject, but may be beneficial to all.

It must be unnecessary to remark, that, on so interesting a subject, no human precaution can be superfluous; and on this principle, children already vaccinated in the ordinary way, should be again vaccinated carefully; and if the infection take place, Mr Bryce's plan should be followed.—Inoculation with the small-pox has been recommended as affording the better security; and where it can be had recourse to, without the hazard of injuring others, it ought to be practised in the case of female children.—Since the last edition of this work, some cases have occurred, where natural small-pox, in a violent degree, took place, although Mr Bryce's test had

* See Practical Observations on the Inoculation of Cow-pox, by James Bryce, 2d Edit.

seemed to have secured the individual from all such hazard. And there can be no doubt that natural small-pox has more frequently happened after vaccination than formerly it did after inoculation.

The other circumstance, in regard to vaccination, which is often apprehended, is the occurrence of obstinate or ugly eruptions on the skin. For this apprehension, however, there is no reason, in as far as can be judged, according to the experience of those who have the most carefully attended to the subject. All the affections of the skin, supposed to have been the effects of the cow-pox, hitherto seen by impartial observers, were diseases with which physicians were familiar long before Dr Jenner and his discovery were ever heard of; and no unprejudiced practitioner has ever ventured to assert, that any new eruption of the skin has appeared since vaccination became general.

It would be inconsistent with the object of this work to give any directions for the treatment of cow-pox. The valuable treatise of Mr Bryce may, with great confidence, be referred to. It is proper, however, to mention, that cases have occurred in which erysipelatous inflammation, extending over the whole arm, shoulder, and part of the back, followed the scab, although the disease had gone through its usual course.

SECTION XVI.

Convulsions.

BOTH infants and young children are liable to convulsions, and perhaps the proper scientific arrangement of this section should have been under the next chapter; but as convulsions happen most frequently, and are most fatal, during the first two years of life, it was deemed preferable to insert the following observations by way of conclusion to this chapter.

In some cases, convulsions come on suddenly; in others, the attack is gradual, and the first symptoms are not easily discerned by the attendants.—In the former, the infant, from being in the most perfect health, turns in a moment livid, his eyes and features are contorted, and his limbs and whole frame are thrown into violent agitations. These symptoms are succeeded by a suspension of vital powers, as in faintings, which may prove fatal, or from which he may gradually recover.—In the latter cases, the infant shews some degree of uneasiness; he suddenly changes colour, his lips quiver, his eyes are turned upwards, and he unexpectedly, as it were, stretches himself out, or his hands become clenched. The lesser degrees of these are called by nurses *inward fits*.

Sometimes there is a rapid and continued succes-

sion of violent or trifling fits, and sometimes very considerable intervals are interposed between them.—The convulsions occur in various degrees of violence, as sometimes the agitation is confined to the muscles of the face and extremities, and the affection is almost momentary, and sometimes the whole body is so convulsed that the infant starts up frequently from bed, and the fits are seldom off.—In some cases, even where the intervals between the paroxysms are pretty considerable, the infant remains torpid, insensible, and blind; and in other cases, the moment the fit is over, the sensibility returns, the first evidence of which is violent screaming.

Convulsions commonly precede the fatal termination of most diseases of infancy, which explains the reason of their appearing in the bills of mortality to be of such frequent occurrence. Accordingly, where they take place after any serious or protracted indisposition, they are to be regarded as the harbingers of death.—But even where the infant had been in perfect health previous to the attack, the event is always to be considered as extremely uncertain, for a single fit may kill. When the return of the convulsions is not suspended within forty-eight hours after active treatment has been adopted, there is reason to dread either a sudden fatal termination, or a long protraction of the disease. In this latter case, if the infant do not become emaciated, there is a probability of his even-

tual recovery, even although he had been blind and insensible for days or weeks. In some rare cases, though the health be restored, imbecility of mind remains. If emaciation attend the protraction of fits, the living powers at last give way.

In ordinary cases, the danger is to be estimated by the cause of the fit, and by the degree of its violence.—Thus, if the cause be some irritation which is naturally of temporary duration, or which can be easily removed, a favourable event may be looked for; but if it be not obvious, it may be suspected to be some state of the brain which admits of no remedy. In many instances, where it was impossible to discover the cause of the fits during life, an accumulation of water within the ventricles of the brain has been found after death.—As to the degrees of violence of the fits, there is always much uncertainty, for infants have recovered who had been for weeks scarcely a few hours free of fits, and others have sunk where the fits had been apparently trifling, and where they had recurred at distant intervals.

As circumstances induce convulsions during infancy, which have no such effect at a subsequent period of life, the predisposing causes of the disease have been supposed to depend chiefly on the condition of the system previous to the appearance of all the deciduous teeth.—There can be no doubt that, during all that time, the nervous system is extreme-

ly susceptible of impression, and the actions of the vascular system are very easily altered or deranged. Accordingly, it is well known that, in general, the younger the infant is, the more readily do fits occur, and that the infants of some families are more liable than others to the disease, apparently from a weak state of the nervous or vascular system being communicated from the parents.

The obvious exciting causes are, dentition, mechanical injuries, acute diseases, impurities of the air, passions of the mind, indigestible or poisonous substances in the stomach, irritations in the bowels from acrid matter, or from worms, and over distention of any portion of the guts, the sudden repulsion of eruptions of the skin, or the stoppage of drains of long standing, and the state of the system previous to the appearance of small-pox, measles, &c.—All these act by disturbing the nervous system, or altering or deranging the actions of the vessels, and some of them probably produce both effects.

It was formerly believed, that certain medicines have the specific power of curing convulsions; and considering the credulity of mankind, and the anxiety of parents, it is not at all surprising that this opinion should be from time to time revived.—Cochineal, misletoe, rue, and musk, are the pretended specifics which have been obtruded on the public of late years.

Cochineal has been chiefly used in the cases of very young infants. Four or five grains, infused for a day in half an English pint of boiling water, to which a few grains of carbonate of potass and some sugar are to be added, is the ordinary formula prescribed. Of this, one or two tea-spoonsful, according to the age, should be given as a dose, to be repeated every hour while the disease continues.—This medicine having been secretly employed many years ago in a case where, under the Author's superintendence, the most active means were at the same time used, and the recovery of the infant having been attributed exclusively to it, he was led to give it a very fair trial.—The result of his experience, in some hundred cases, has been, that it is perfectly inert; but as it can do no harm, he has been often induced to recommend its use, in conjunction with the suitable powerful remedies, merely to prevent the officiousness of credulous persons from forcing it upon the notice of anxious parents.

Experience has also proved, that the misletoe has no specific power, although its virtues were so extravagantly extolled by a physician about the beginning of last century (Sir John Colbatch), that he solemnly^{*} returns thanks to God for the discovery of so certain a cure for so alarming a malady.

Rue and musk have been particularly recommended by Dr Underwood, and are certainly valuable medicines in many cases, but they are by no means entitled to the high character which that

author bestows on them, as they seem to have no superior power to the other antispasmodics.—Of the quack medicines advertised for the cure of this disease, it may be proper to say, that, as far as the Author can judge, they are merely preparations of opium in disguise, and, therefore, the observations to be made on that medicine are applicable to them.

Since no specific cure for convulsions has been hitherto discovered, the object of the practitioner ought to be, to moderate the violence or to stop the progress of the fit, and to prevent its return.

The former of those indications is to be accomplished by having the infant, while in the fit, immersed in a large tubful of water, heated to the 96° of Fahrenheit, or to a warmth that the hand can easily bear. If, after being in the bath for a few minutes, he do not recover, such a quantity of spirits of hartshorn should be added to the water as shall render it tolerably stimulant. Should the fit still continue, a wetted feather is to be forced into the upper part of the throat, if there be any fulness of the vessels of the neck, or other evidence of threatening suffocation from oppression of the stomach; and if there be no marks of such a state, an assafætida glyster ought to be carefully administered. In general, however, the warm bath answers the purpose of shortening the fit, and therefore it ought always to be had recourse to whenever the fit threatens.—If there be burning heat of the surface, and if the fits have been preceded by startings,

sponging the face and neck with cold water and vinegar, affords the readiest means of relief.

For preventing the return of the convulsions it is necessary to remove, if possible, their causes.—In order to ascertain these, the infant is to be completely stript, and every part of its person is to be examined with great care.—No reliance is to be placed on the accounts of the attendants, as an injury which has been the effect of negligence is never disclosed. If there be no obvious cause, the gums over the teeth which appear the most advanced are to be divided, a brisk purgative is to be given, and the purging is to be kept up so long as the stools are of an unnatural appearance.

Where the infant has evident determination to the head, indicated by flushed face, insensibility, or frequent starting and oppressed breathing, one or more leeches are to be applied to the temple. In such cases the superficial heat is to be relieved by sponging the whole surface frequently with cold water and vinegar, and if the opening at the fore-part of the head, called the *anterior fontanelle*, which continues distinct for the first two years of life, be swelled, or protuberant, cloths soaked in some artificial cold solution are to be kept constantly applied, till the swelling subside.

Where suppression of some accustomed evacuation, or repulsion of a rash, have preceded the fit, a large blister should be applied. The same remedy is useful when the cause is obscure, as affections of

the skin are very often found to relieve irritation of internal parts. On the same principle, and also with the view of supporting the vital powers, some external stimulant is to be rubbed over the surface (as over the ribs or back-bone) every six or eight hours. Amber oil, hartshorn and oil, or a mixture of one part of aromatic spirit of ammonia, two parts of laudanum, and three parts of olive oil, may be used for this purpose. No more than one or two tea-spoonsful of any of those preparations should be applied at a time.

Several instances have fallen under the Author's observation, where external stimulants have apparently saved life, after the infant had lost the power of swallowing for two or three days. In some obstinate cases, shaving the head, and bathing it every hour or two with cold water and vinegar, in the proportion of one part of the latter to five of the former, has seemed singularly useful. Sometimes, too, fits which had continued for some days have ceased after a blister, covering the whole head, had begun to discharge freely.

Opium has been much employed in cases where the cause of the fits cannot be detected.—After having, for several years, been convinced in his own mind that this medicine is rather injurious than beneficial, the Author was induced again to give it a most impartial trial, from the recommendations of some of his senior brethren, to whose opinions he is always anxious to pay every deference.—The result

of this trial has been, that in no case has it ever seemed to increase the intervals between the fits; and, in many instances, it has evidently shortened them, while the fits have been more severe after every dose of opium.—When the convulsions have been the effect of the whooping-cough, great benefit has been derived from the tincture of hyoscyamus. Twenty drops, evening and morning, have been repeatedly given to infants within six months of age. Camphor, in the form of glyster, has seemed serviceable in some few cases, but chiefly in children beyond the second year. Where great debility attends, it is necessary to remark, cordials must be directed, and if the infant cannot swallow, nourishing injections are to be exhibited every three hours.

When a child seems to be suddenly deprived of life by one or two fits, if he had appeared previously in good health, he ought, on no account, to be considered as irrecoverably lost: the common means for restoring suspended animation should be carefully employed as long as his colour is not entirely changed.

After an infant or child has recovered from convulsions, every plan which can improve the general health ought to be recommended, and all causes of irritation are to be guarded against with the utmost care; and as slight disorders of the stomach and bowels have often been followed by a most alarming return of the fits, great attention ought to be paid to the diet, &c.

CHAPTER II.

DISEASES OF CHILDHOOD.

CHILDHOOD extends from the period at which all the milk-teeth are protruded above the gums to the age of puberty. During all that time, the growth of every part of the body is progressively advancing; the several limbs are acquiring increased activity and strength; the various secretions and excretions are gradually altering in their appearance and nature; and the organs of the senses, and the faculties of the mind, are improving in power and in energy.

While those important changes are going on, the bones acquire additional strength and size, the ligaments and muscles become firm, the cellular membrane and skin more dense, the action of the heart and arteries less frequent, the respiration more slow, the nervous system less susceptible of impression, and the sympathy between the skin and the internal parts less considerable.

The milk-teeth begin to drop out or to be shed, as it is called, from the fifth to the seventh year, and the cutting of the permanent teeth goes on till the twelfth or fourteenth, by which time twenty-eight teeth are above the gums. The wisdom-teeth, which complete the number, are, in many instances,

not added till between the twentieth and thirtieth year. The milk-teeth are shed by the simplest possible means, for their roots and part of the cells in which they had been contained being pressed upon, in consequence of the enlargement of the second set of teeth, are wasted or absorbed, so that they are more and more loosened, till they drop out. It is a popular notion that the milk-grinders are not shed, but this has arisen probably from their being rendered so thin previous to their separation, that they are imperceptibly swallowed with the food or while asleep.

As to the order in which the permanent teeth generally appear, the following is the most ordinary. First, the middle fore-teeth of the lower, and the same of the upper jaw; secondly, the lateral fore-teeth, and soon after the anterior grinders of the lower jaw; thirdly, some time commonly now intervenes, and then the corresponding teeth of the upper jaw are cut; fourthly, the anterior bicuspidati of both jaws come out about the ninth year, and about the tenth, or eleventh, the posterior ones; and lastly, about the twelfth or fourteenth year, the cuspidati or eye-teeth, and the central grinders, are protruded all about the same time. The wisdom-teeth, as already mentioned, do not appear for several years after this.—From the above order of succession there are many exceptions, as children often cut their permanent teeth very irregularly.

SECTION I.

Ordinary Management of Children.

OF the importance of attending to the ordinary management of children no one can doubt, and yet there are few duties more neglected. Ignorant or selfish persons are often intrusted with a charge, which would afford to the opulent and the idle the most useful and agreeable occupation, and to the industrious and active part of the community the most gratifying recreation. In this work it would be improper to dwell minutely on this subject, and therefore a few very concise hints are all that can be attempted.

CLEANLINESS.—This should be inculcated as a duty from the earliest period, as nothing can contribute more to content of the mind and health of the body. On this account the child ought to be taught the utmost cleanliness of person, not only by frequent ablution in general, but also by minute attention to the state of the hair, nails, and teeth. There can be no doubt that many of the diseases of children in the lower ranks, both general and local, are owing entirely to neglect of cleanliness.

CLOTHING.—In this climate the clothing should never be so heavy as to render ordinary exertions

fatiguing, but it ought to be calculated to retain heat. The attempts to rear children in a hardy manner, by allowing their legs to be bare, and other parts of the body to be much exposed, have proved most unsuccessful, having, in many instances, stunted or perverted the growth, and in some cases absolutely destroyed life, by inducing inflammation of the bowels or lungs.—It is unnecessary to add, that cleanliness in the dress is indispensable.

FOOD.—The change of diet, after weaning, should be introduced gradually. Preparations of milk, of eggs, of vegetable and animal jellies, should precede solid animal food.—During childhood the diet should be varied, and the proportion of vegetable and animal matter ought to be adapted to the constitution of the individual. The indiscriminate use of slops is most injurious, as it certainly increases the tendency to scrofulous complaints. No other condiment than salt seems necessary, and all fermented liquors, except small beer or spruce beer, are pernicious.

SLEEP AND EXERCISE.—For the first two years of life a good deal of sleep is required, but, after that time, from eight to ten hours are sufficient. It is of the utmost importance that the bed-chamber be well ventilated; and therefore the practice, in many boarding-schools, of crowding several children into one sleeping room, cannot be too much reprobated.

Exercise of the body and of the mind is fully as essential to the child's health as suitable nourishment. Not only ought all the amusements to be calculated to promote this, but even the studies should for a time be subservient to the same purpose. Children have an ardent curiosity, a most retentive memory, and a strong propensity to, as well as a great power of imitation. Those circumstances prevent their being capable of patient attention to one object for any length of time, and explain the perpetual restlessness, levity, and caprice, which form the characteristics of that age.—In regulating the exercise of the mind and body, those natural dispositions should be invariably kept in view. It may be truly said, that many facts relating to mechanics and to natural history may be communicated with advantage to young children.—It is easy, therefore, to contrive variety of occupation for their minds, and, at the same time, to afford them a good deal of bodily exercise in the open air, without allowing them to acquire those habits of idleness and of sauntering, which are sometimes with so much difficulty eradicated.

SECTION II.

Local Diseases.

EAR-ACHE—is a very common and a very painful complaint, being the natural effect both during in-

fancy and childhood of teething, and being also readily excited by exposure to cold. Its progress may often be checked by means of a large poultice of bread and milk, with a little fine oil, applied as warm as the child can bear, and renewed every three or four hours, till the pain be relieved, together with the exhibition of a brisk purgative. Where the child has had repeated attacks of this disease, a little warm oil and laudanum should be dropt into the ear before the poultice be applied.

If suppuration follow, some warm milk and water ought to be carefully injected by a syringe three or four times a-day, in order to wash out the matter.—In some cases, a discharge of what seems purulent matter, having a most offensive smell, continues for weeks, or even for months, attended with partial deafness. There is reason to suspect that, in general, this discharge is a diseased condition of the ear-wax, and on this account detergent or astringent washes might do great harm. The frequent injection of milk and water, as in the former case, a succession of blisters on the back, applying a fresh one whenever the former one shall have healed (which is better than a perpetual blister), and some tonic medicines, such as filings of iron covered with sugar, or wine of steel, are to be directed.

BURNS.—In many constitutions, burns or scalds, which seem at first quite trifling, become, from mismanagement or neglect, most troublesome sores.

leaving ugly marks, or even undermining health. All parents ought therefore to be acquainted with the following most simple and efficacious means of treating them.

If the scarf-skin be not removed by the injury, cold vinegar (the stronger the better) should be immediately applied to the parts affected, by means of linen rags soaked in it, and kept constantly wet; and, notwithstanding the aggravation of agony occasioned by this application, it is to be continued till the pain abate. In some irritable children, it is necessary to give a large dose of opium, in order to enable them to bear it, and, provided a brisk laxative be directed within a few hours, no harm can follow the opiate. When blisters arise on the burned part, they are to be opened before the fluid within them concretes, and to be covered with any unctuous substance to defend them from the acrimony of the vinegar. Where the scarf-skin is removed, a rag dipt in a mixture of equal parts of linseed-oil and lime-water, is to be first put on, and above that the vinegar should be applied.

The treatment, when sores follow burns, must be varied according to circumstances. If they be superficial, and so situated that it is of consequence to prevent the possibility of a mark or scar, the best application is the liniment directed in the appendix, put on several times a-day by means of a fine hair pencil.—Where the sores are extensive, seem deep, and discharge copiously, they should be covered

evening and morning, or more frequently, according to the exigency of the case, with a mixture of powdered camphor and chalk, over which a large emollient poultice of bread and milk, as warm as can be endured, ought to be laid.

CHILBLAINS.—In some children, the delicacy of the skin is such that no ordinary means can prevent chilblains. In the majority of cases, however, the usual precautions of making the child wear leather, or oiled silk gloves and socks, of never allowing him to sit for any length of time with wet feet, nor to approach the fire when his feet or hands have become torpid with the cold, are quite sufficient.

Slight degrees of chilblains may be readily cured, by applying to the affected parts any stimulating liquid, as camphor dissolved in oil of turpentine, or spirits of wine, or the common Riga balsam, and keeping them well covered, so as to prevent the access of cold. A very efficacious form of stimulating application has been employed successfully, where other means have failed, viz. a mixture of one part of the aqua ammoniæ with three parts of the tincture of soap.

The violent degrees of chilblains, which in this climate seldom occur in any other than the lower ranks of society, resemble burns in their appearance and consequences. This explains a fact which is well known among mariners who have been accustomed to high latitudes, that the continued applica-

tion of strong vinegar, in some cases where sailor-boys were quite lame from this cause, has completely cured them in four or five days. The ordinary sores which follow chilblains yield to any slightly stimulant dressing, such as one part of the oil of turpentine to four parts of basilicon ointment.

WARTS.—If attended to at the beginning, these may be readily removed, by being wetted four or five times a-day with a saturated solution of sal ammoniac (muriate of ammonia), which is the only caustic application that can be used with safety by others than professional men.

SQUINTING.—When this is an effect of some acute disease, it ceases with the other symptoms, and requires no particular attention ; but, when it is unconnected with general health, it merits the most unremitting care, because the deformity may be certainly cured, or greatly palliated. As the most simple means may be employed for this purpose, there can be no excuse for negligence.

In infants, the eye which squints should be artificially closed, for several days or weeks, according to the effect, or a patch of bright-coloured silk should be applied daily (varying the colour occasionally), on the nose or on the temple next the affected eye, as the squint may be outwards or inwards. This method has been much recommended by Dr Underwood. Young children who squint should be made

to wear constantly, for many months, light wooden goggles so nicely fitted, as to prevent their seeing with both eyes, unless the pupils of both be directed straight forwards. Should this prove of no avail, the sound eye may be tied up, while the goggle is to be adapted carefully to the other eye.

If a child be conscious of squinting, which is sometimes the case at an earlier age than might be suspected, or if the habit have been acquired from imitation, a cure may be certainly accomplished, by having the child constantly watched, and inflicting, or threatening a severe punishment every time he is caught squinting. This method has diminished the deformity in many instances, where the habit had been established for too long a period to be completely eradicated.

AFFECTION OF THE HAIRY SCALP CALLED RING-WORM.—This disease, beginning like a dry scurf in one or more spots on the head, and destroying the hair of the part, by degrees spreads over the scalp, and forms scabs which are generally in patches. It is quite different from the common scald-head; and its connection with *Ring-worm* is proved by that peculiar affection of the skin appearing occasionally upon the brow, or hands, or wrists. It is highly infectious, and, when neglected at first, proves one of the most obstinate local diseases. This has led some practitioners to suppose it connected with some disorder of the general system, and others to

suggest the most barbarous methods of treatment, such as extirpating the hair with tweezers, or with a pitch-cap, &c.

The slight or incipient degrees of this disorder may be readily cured, by having the affected parts bathed every night with hot vinegar, and afterwards rubbed with the mild citron-ointment. In cases of long standing, the head must be kept shaved and anointed for a number of nights, proportioned to the virulence of the affection, with the ointment called *Unguentum ad scabiem*, prescribed in the *Pharmacopæia Pauperum* of Henry Banyer, the preparation of which is specified in the appendix. In some cases, where the child is delicate, it is necessary to mix that ointment with an equal part of simple cerate, and sometimes its use must be alternated with that of basilicon ointment.

Many cases of the disease have been cured by those means, where the sulphur, the tar, and the ordinary mercurial ointments, linseed-oil and lime-water, a strong infusion of tobacco, and several other powerful stimulating applications, have failed. But it requires unremitting attention on the part of the practitioner, to direct the mode of using the ointment, and the applications with which it should be alternated. The chief error usually committed, which, perhaps, may explain the failure of ordinary practitioners in so many cases, is desisting from the means before the cure be completed.

It is always proper, in every case, to regulate the

diet, and to direct a brisk opening medicine to be given every third or fourth day. In cases of very long standing (and the Author has been consulted in cases where the disease had continued for nine years), a course of Plommer's pills or Spilsbury's drops ought to be prescribed.—In several of those cases, great benefit has seemed to accrue from washing the affected parts with diluted mineral acids, previous to the application of Banyer's ointment.

SECTION III.

Bowel Complaints.

VOMITING—precedes many febrile and inflammatory diseases of children, and, therefore, if it be accompanied with any evidence of fever or pain, it is to be regarded as a symptom depending upon some affection of the general system.—Under such circumstances, the treatment directed for the several disorders alluded to is to be pursued.—But sometimes it is the effect of some indigestible substance pent up in the stomach. This may be suspected, if the pulse be natural, the appetite impaired, and the thirst considerable, while the vomiting remits and recurs. Pieces of cheesy matter, apparently formed from milk that had been swallowed weeks before, have been sometimes found to have produced

all the irritation in such cases. Ipecacuan vomits are the obvious remedies.

LOOSENESS.—Where this does not happen after some disease, which had previously diminished the energy of the system, it is of little consequence, and ought not to be suddenly checked. An emetic, followed up by a dose of rhubarb and magnesia, or some preparation of chalk, or some of the neutral salts, or, in some few cases, small doses of calomel and Dover's powder, with a suitable regulation of the diet, should be prescribed.

COSTIVENESS.—This is sometimes an accidental occurrence, in consequence of inattention to diet, or exposure to cold, and is readily removed by the ordinary means. But in some cases it is a chronic disease, which steals on gradually, attended with loss of appetite, pasty colour of the countenance, constant itching of the nose, fetid breath, grinding of the teeth during sleep, flabbiness of the flesh, unwillingness to make any exertion, and swelling of the belly.

If these symptoms be neglected, a number of very distressing complaints follow ; such as excessive thirst, urgent fever, aggravated towards night, violent pain in the head, occasional delirium, inability to articulate, constant picking of the nostrils or lips, or even of the eyes, and involuntary gesticulations, approaching to or imitating convulsions.

These different complaints, which are variously modified in different cases, have been very accurately described by Dr Butter, under the title of the Infantile Remittent Fever. Their duration is more variable than he has supposed, but their gradual abatement, as the child becomes convalescent, has been minutely and faithfully detailed by that author*.

The former degree of this complaint can be distinguished without difficulty, but the latter so nearly resembles complicated fevers, or affections of the head, that the most experienced and attentive practitioner is sometimes at a loss to ascertain the true nature of the case. The appearance of the countenance, the nature of the stools, and the state of the pulse, are the chief marks of distinction.

There can be little doubt, that neither the mere accumulation of the stools nor the torpor of the bowels on which that appears to depend, can explain the various symptoms produced by this condition of the digestive organs. There is every reason to suppose that there is an altered action, not only in the stomach and intestines, but also in the liver and lacteals, perhaps in all the parts concerned in the digestion of the food. When this has continued for a certain time, the accumulation of acrid matter,

* A Treatise on the Infantile Remittent Fever, by William Butter, M. D., &c. 1782.

which is the consequence, adds greatly to the irritation, and, while all this is going on, the circulating juices become depraved.

In the treatment of those cases, the great object to be aimed at should be to alter the morbid actions of the digestive organs, and to palliate the distressing symptoms which attend. The former of these is to be accomplished by the use of powerful and varied purgatives, in much larger doses than were formerly prescribed. Rhubarb, aloës, gamboge, jalap, senna, cathartic extract, and castor-oil, may in some cases be severally necessary. The doses are to be given every six or eight hours till they operate, and their effects are to be kept up by varying the medicine till the stools discharged be of the natural colour and consistence. The quantity of vitiated feculent matter which is sometimes thrown off before this favourable change takes place, can scarcely be imagined. On this subject the observations of Dr Hamilton *senior*, in his valuable publication on the use of purgatives, confirm what the author had been accustomed to mention in his lectures for several years before the appearance of that publication.

Where the disease is in the mild degree described above, it gives way in a few days to this treatment, and all that is farther required is some tonic medicine, which shall strengthen the stomach and bowels, together with a due regulation of the diet, and occasionally a purgative at bed-time.

Preparations of iron are found the best tonics in those cases, and there are two forms in which children readily take that mineral, viz. the filings covered with sugar (sold by the confectioners in this city under the name of Steel-carvy) and wine of iron. The dose of the filings should be a half tea-spoonful once or twice a-day according to the age, that of the wine, a tea-spoonful.

But where the disease has been of long standing, or where it is accompanied by the febrile and other symptoms already enumerated, the mere exhibition of laxative medicines proves of no avail, as they are either rejected by vomiting, or remain inert in the stomach and bowels. Under those circumstances, the belly is to be fomented every six or eight hours by means of flannels wrung out of a hot decoction of chamomile flowers, after which some stimulating substance, such as the *Ol. ammoniatum*, with opium or camphor, should be carefully rubbed all over its surface. If the torpor of the bowels still resist the purgatives, small doses (as a grain) of calomel, combined with extract of *hyoscyamus* or opium, should be given every six hours, and a solution of aloës in a strong decoction of senna, to which some salt or castor-oil are to be added, ought to be occasionally exhibited as a glyster. In some cases, antimonial preparations, combined with the mercurials and opiates, have relieved all the symptoms very rapidly.

During the progress of convalescence, suitable nourishment, with a moderate allowance of wine,

asses milk, preparations of myrrh and steel, the warm bath, particularly with sea water, and country air and exercise, are to be advised.

FALLING DOWN OF THE GUT.—This is a common effect of bowel complaints, and seems to consist in a relaxation of the straight gut, with at the same time a spasmodic stricture of its sphincter. It is generally of temporary duration only, and is easily replaced by slight pressure. Nurses commonly apply a piece of woollen cloth for this purpose, but a better plan is to lay the child upon his face, to separate his thighs, and then to press together both his buttocks. If those means fail, it becomes necessary to introduce the fore-finger, previously greased, into the gut, to remove the stricture from the sphincter. This is a more safe and speedy method than the application of astringent substances to the protruded parts, which might irritate or inflame them.—With the view of preventing the frequent recurrence of this most unpleasant, though not dangerous complaint, all irritations of the bowels ought to be guarded against, the bottom should be dipt twice a-day into a tubful of cold-water, in which a red-hot iron had been repeatedly quenched, and the child ought to be made to sit regularly on a firm hard seat.

SECTION IV.

Worms.

THREE species of WORMS chiefly infest the human intestines, viz. what naturalists call the *tenia*, the *lumbricus*, and the *ascaris*. As the first of these is very rarely met with in children in this climate, it is unnecessary to offer any observations on it.—The *Lumbricus* resembles, in general appearance, the earth-worm; but when minutely examined, is discovered to be perfectly different in structure.—The *Ascaris* is a small white-worm, like a piece of ordinary sewing thread, not exceeding half an inch in length.—The *lumbrici* have been found in every part of the alimentary canal, but chiefly in the small intestines.—The *ascaris* is generally confined to the straight gut.

The origin of these worms is involved in much obscurity. As they cannot live in any other situation than in animal bodies, it is not probable that they originate from ova taken in with the food, and it is still less probable that they are the product of putrefaction. That particular articles of diet favour their increase is a prevalent belief, but this seems to be one of the popular prejudices for which there is no valid foundation.

AS LUMBRICI have appeared in the healthiest children, many most respectable practitioners have

ascribed all the symptoms usually supposed to arise from worms to indigestion, and to the accumulation of acrimonious matter in the intestines. Some have improved upon this idea by asserting, that worms answer the useful purpose of consuming what is superfluous or acrimonious in the food.—When this subject is impartially considered, however, it will appear that there is more reason for the popular opinion than many practitioners have thought.—If ascarides in the straight gut, by their irritation, disturb other parts of the intestines, which, it is presumed, will not be denied, it can scarcely be doubted that lumbrici affect the parts in which they are placed. Accordingly, in many instances, a lumbricus has been found in a portion of the gut that had been introsuscepted, and in one case (in a child of six years of age) delirium and convulsions took place for above two days, till two lumbrici were vomited from the stomach, on which all irritation ceased.—Many of the symptoms occurring where there are lumbrici, are owing entirely to an impaired or diseased condition of the stomach and bowels; but that this may have been originally occasioned, or may be greatly aggravated by the irritation of the worms, is indisputable; and it is probably the difficulty of distinguishing this from the other causes of indigestion which has led to the controversies on this subject.

The symptoms commonly alleged to denote the presence of *lumbrici*, are sallowness of the com-

plexion, dulness of the eyes, frequent pain in the head, swelling of the nostrils and upper lip, excessive itching at the nose, grinding of the teeth during sleep, fetid breath, irregular appetite for food, there being sometimes a loathing and at other times a most urgent craving, occasionally sickness, swelling of the stomach and bowels, frequent fits of griping, disturbed sleep and frightful screamings during the night, short dry cough, wasting of the flesh, and reduction of strength. Convulsions and irregular fevers, sometimes imitating very nearly the symptoms of water of the head, have also been alleged to indicate the same cause.—It must, however, be admitted, that these symptoms, or many of them at least, are met with in cases where no worms are discovered,---and, therefore, it is in every case extremely difficult, if not impossible, to determine the existence of intestinal worms, unless they appear in the stools.

Since it is impossible to point out with precision the marks by which the presence of *lumbrici* may be ascertained, it is fortunate that the practice proper in cases of indigestion is the best which can be adopted at first, in those where all the complaints have been excited by worms. In the early stages, that is when children begin to droop, to feel tired after the most trifling exertions, to lose their appetite for food, and to shew signs of irritation in the stomach and bowels, one or two doses of brisk purgatives, followed by a course of any tonic, such as the

worm-crude, chamomile flowers, preparations of iron, &c. are all that may be necessary.

But where the complaints have become alarming and complicated, along with the means already recommended for those cases which have been styled by Dr Butter the Infantile Remittent Fever, medicines calculated to poison the worms should be prescribed. Of these the most efficacious, according to the Author's experience, are oil of turpentine, calomel, gamboge, and sea-salt, or neutral salts combined with sulphur. To these Dr Parr, in his Medical Dictionary, a work containing a very valuable collection of practical observations, has added the bears-foot, which he considered as a specific for the destruction of worms. Much larger doses of some of the remedies above enumerated than are usually advised should be directed. It is in this respect alone that the patent worm-medicines are sometimes so much superior to the prescriptions of regular practitioners.

ASCARIDES may be suspected if the child have frequent colic, with excessive itching about the extremity of the gut, and in some cases irritation about the bladder. The ordinary means for the expulsion of those worms, viz. stimulating glysters, such as a strong decoction of chamomile flowers with salt and castor-oil, or a quantity of aloës suspended in cow-milk, or mucilage of gum-arabic, to which salt and castor-oil are to be added, are usually effi-

cacious where they can be exhibited. But children are so restless from the second to the fifth year, that they can seldom be prevailed upon to submit to this practice. In such cases, a large dose of aloës in fine powder, with a small proportion of calomel, given every third or fourth night, seldom fails to answer the purpose most effectually.

SECTION V.

Fevers.

THE common LOW FEVER sometimes prevails as an epidemic among children. It begins more frequently with marks of languor and fatigue than with a distinct chilly or cold fit. Sickness at stomach, too, is an ordinary occurrence at the commencement. The increased heat, thirst, pain in the head and back, and restlessness, soon follow. Within thirty-six hours there is, in the greater number of cases, a more remarkable remission than is usual in grown persons affected with the same disease; and this remission recurs every twenty-four hours, though in a less evident degree, till the termination of the fever. The exacerbation which corresponds, is equally remarkable at first.

If the fever do not abate on the fourteenth, it is apt to last till the twenty-first or twenty-eighth, or even the thirty-ninth day. Where it is much pro-

tracted, insensibility, with incapability of swallowing, sometimes occurs for a considerable time before the crisis ; and after the original disease has ceased, there is always hazard of hectic fever or dropsical complaints succeeding.

Any detailed view of the causes and cure of low fever, would be misplaced in a work of this kind ; all that should be aimed at being a few hints.

On the first appearance of indisposition, a large dose of ipecacuan, to produce full vomiting, should be given, and, as soon after as the stomach can retain it, some powerful laxative medicine. If these means do not relieve or prevent the dry burning heat of the skin, the whole surface is to be sponged with cold water, to which a little vinegar ought to be added, and the child may be allowed to drink as much of any cooling liquor as his thirst prompts him to do. But if there be fixed pain in any particular part, or any tendency to bleeding at the nose, the application of one or two or more leeches ought to precede the cold aspersion.—If the remission happen after this treatment, diluted wine, in a quantity proportioned to the state of the individual, very often has the effect of preventing the return of the fever. When the first symptoms have been neglected, while the seventh day has not passed, the emetic cannot be advised, but the other means are to be employed.

When the fever is protracted, the chief circumstances to be attended to are, the most scrupulous cleanliness, sponging the surface whenever the heat

is unequivocally greater than natural, due ventilation, with sufficient coolness of the air of the apartment, regular supply of cooling drink, such means as shall procure one or two or more dejections daily, and whenever the low stage begins, supporting the strength by the liberal use of diluted or pure wine, and by a succession of blisters, if the living powers sink greatly.

When considerable oppression, tendency to vomiting, or much restlessness, with great frequency of the pulse, and hot skin with a parched tongue, take place pretty early in the course of the fever, some antimonial preparation, joined with calomel and jalap or aloes, has been found to occasion the free discharge of a great quantity of bilious matter which had resisted other means, and to produce a very unexpected and rapid cessation of all the alarming symptoms.

In cases of long protracted fever, when the child seems quite torpid and apparently exhausted, nourishment should be supplied by injections of beef-tea, wine and milk, or panada and wine frequently repeated. Parents ought to be encouraged never to lose hope on such occasions, as many recoveries have happened where the most eminent practitioners had despaired. Frequent trials ought to be made to ascertain when the power of swallowing is restored; for it has often been found, that children could be made to swallow when the attendants had relinquished all attempts at giving food by the mouth.



Blisters to the extremities, or sinapisms to the soles of the feet applied for a quarter of an hour at a time, have sometimes seemed to rouse the vital powers, after they had been supposed nearly extinct.

Whenever convalescence begins, the same precautions are to be adopted as after the decline of eruptive fevers. If considerable debility of the mind remain, notwithstanding the recovery of bodily strength, country air and exercise, with cold bathing, are to be directed. Although many months, in some instances, have elapsed before there was any perceptible improvement in the mental powers, yet at last the child has regained the full use of its faculties.

SECTION VI.

Hooping-Cough.

THE HOOPING-COUGH, or what is called in Scotland the *chincough* or *kinkcough*, begins like a common cold, attended in some cases with fever, though frequently with little derangement of the system. By degrees the symptoms of cold cease, but the cough continues, and is accompanied with circumstances which mark its nature. These are, the suddenness of the fits of coughing; the great agitation the child feels during the cough, which leads him, at the instant it comes on, to lay hold of what

is nearest in order to support himself, the coughing being excited by emotions of the mind, and by any considerable exertion, and each fit of coughing ending in vomiting or in hooping (called also back-draught) which resembles threatening suffocation, and seems to arise from a convulsive action of the upper part of the windpipe, while there is an irresistible necessity for taking in a full inspiration.

In the favourable cases of this disease there is no fever, no diminution of the appetite for food, no apparent deviation from the ordinary health ; and the fits of coughing occur only twice or thrice during the night, and during the day take place commonly after a full meal, or violent exercise, or emotions of the mind. If hooping follow the cough, it is in a very trifling degree.

But in the unfavourable cases, great fever and weakness, or feverish heat, with evident determination to the head, occur at the commencement of the disease, accompanied with various symptoms of derangement, according to the constitution of the individual. The fits of coughing are very frequent, of long continuance, sometimes preceded but more often followed by breathlessness, always ending in the ejection of a quantity of tough phlegm, or sulphur-coloured defluxion, and occasionally by discharges of blood from the nose or from the bowels. The hooping in such cases renders the face quite livid, and not unfrequently terminates in convulsions, or in faintings. It always seems to threaten instant suffocation.

Nothing is more uncertain than the duration and event of this disease. In the mildest form in which it occurs, it generally continues for two or three months; and often, after it has apparently ceased, an accidental exposure to cold occasions a return and an aggravation of the symptoms.—In the violent degrees, many months elapse before the disorder seems to be mitigated; and the return to strength, where the child recovers, is very tardy. It is almost impossible in any case to foretel with certainty the event; for in many instances the child has been suddenly carried off, after it had for several days, or even weeks, had the most complete mitigation of all the symptoms; while, in other cases, every circumstance which commonly indicates approaching death, has been observed for a considerable time, and yet the child has eventually struggled through. Where the fatal event takes place, it is in consequence either of exhaustion, in which case the feet are commonly much swelled for some time before death, or of a fit of suffocation, or of a convulsion.—Some estimate of the danger may be formed by attending to the age, constitution, and symptoms of the patient, and the season of the year. Experience proves, too, that it is more fatal in some years than in others.

Hooping-cough occurs only once during the life of the individual; but in some children, even for years after it has ceased, every common cold is attended by a cough which seems somewhat like the hooping-cough. During teething, too, there is some-

times, as has been already mentioned, a kind of crowing, which, to a superficial observer, seems to resemble the back-draught.—Infants and children of every age and constitution are liable to this disease : and, contrary to what happens with respect to other infectious diseases, the youngest infant is as subject to it as the oldest child.

There can be no doubt that the exciting cause of the whooping-cough is a contagious matter, which, although so subtle as to elude the cognizance of the senses, may nevertheless be conveyed from one child to another at a very considerable distance, through the medium of a third person. Infants a few days after birth, have become affected with this disease, in consequence of being handled by those who had been in a house where the whooping-cough was prevailing.—It was formerly believed, that after the original cause had ceased to have effect, the disease might be continued merely from habit ; but this opinion must be erroneous, for while the cough lasts the infant is apt to infect others.

The immediate cause is a peculiar, or as medical men call it a *specific*, inflammation of the fine skin which lines the ramifications of the windpipe, and of the air-cells of the lungs, the effect of which is an increased quantity, and depraved quality, of the fluid which naturally lubricates that skin. In some cases the quantity is such as to exhaust the strength, and in other cases the acrimony not only keeps up a constant irritation and feverishness, but also extends the

inflammation to the substance of the lungs. Hence may be explained the various phenomena of the disease.

In the treatment of the whooping-cough, the great objects to be aimed at are, to moderate the violence of the cough, to restore or support strength, and to palliate troublesome or alarming symptoms.

Occasionally the public and the profession have been assured that there are certain specifics for the cure of this disease, and some practitioners of established reputation have seriously believed that they could check its progress in the course of a week. The author can say, that although he has given a fair trial to those several boasted remedies, he has hitherto seen no benefit from their use; and the fact, that both in London and in Edinburgh, whooping-cough prevails every year extensively, and with severe and dangerous symptoms, ending in many cases fatally, is a sufficient refutation of such pretensions.

For accomplishing the first of the above purposes, vomits repeated daily, or oftener, according to the exigency of the case, and frequent change of air, are to be chiefly trusted. It may be known when the air disagrees, by observing that the child is more and more fretful and restless during the night; and, on this account, in many cases it is found necessary to change the residence weekly. The younger the child is the more are vomits required, so that it is often necessary to give one, evening and morning, for weeks together.

The strength is to be supported by suitable nourishment. Where inflammatory symptoms attend at the beginning, the diet should consist almost entirely of milk and vegetables; but when much debility takes place, animal food in various forms, and cordials adapted to the age and constitution, are indispensable. The Peruvian bark is in many of those cases extremely useful. It may be given mixed with a solution of extract of liquorice.

In general, the chief alarming or troublesome symptoms which require palliation, are the inflammatory and feverish affections, and the whooping.—The inflammatory symptoms, excepting when very violent, are best moderated by regulation of diet and by keeping the bowels open. On some rare occasions, bleeding must be had recourse to; but it requires much discernment to judge of this, and irreparable mischief may be done by the subtraction of blood.—The feverish symptoms are mitigated by frequent ablution with tepid water, by the use of emetics, and by change of air. When they are attended with great debility, cordials and occasional blisters must be employed.

The most formidable symptom of this disease is the whooping, as it always, when violent, threatens immediate death.—Where it is not alleviated by the means already recommended, particularly by frequent emetics and change of air, stimulant substances must be rubbed over the back bone, and the ribs or breast, evening and morning. The rectified oil of amber answers for this purpose very well. Roche's

royal embrocation is used with the same intention. Garlic ointment, rubbed on the soles of the feet, seems particularly efficacious, where uneasiness in breathing continues during the intervals between the fits of coughing. Narcotic medicines, given internally, such as the hemlock and henbane, are sometimes useful in lessening the violence and frequency of the hooping, and are much preferable to the usual preparations of opium.

SECTION VII.

Epilepsy and St. Vitus's Dance.

EPILEPSY.—This is distinguished from the symptomatic convulsions, which are the effect of irritation, of terror, of blows upon the head or other parts, of water in the head, or of feverish disorders, by the suddenness of the attack, the previous history of the child, and the restoration of the usual state of health a very short time after the cessation of the fit. —The progress and event of this disease are so various and uncertain, that it is quite impossible to form any accurate conjecture respecting them in any given case. In some individuals the convulsions become more and more frequent, the energy of the mind decreases in proportion, the countenance assumes a marked appearance of stupidity, fatuity takes place, and the strength is at last exhausted. In others, the fits happen only now and then, chiefly during

the night, or after fatigue or excess of any kind, the senses and the bodily health remain entire, and towards puberty the disease ceases entirely. On some occasions, the child, after having had convulsions several times a-day for a considerable time, suddenly becomes well.

The causes of epilepsy are extremely obscure. In some children very trifling circumstances produce it; such as constipation, worms, fatigue, anxiety, and irregularities of diet; while the occurrence of the same circumstances, even in a greater degree of violence, in other individuals, has no such influence. That the disease depends upon some peculiar condition of the nervous system cannot be doubted, but what that is has not yet been satisfactorily explained.

With regard to the method of cure, many of the observations already detailed, on the subject of the convulsions of infants, are equally applicable to the epilepsy of children. The indications to be kept in view are, to remove or prevent the exciting causes if these be manifest, and to improve the general health. —Where the exciting causes are obscure, a continued course of laxatives, occasional blisters, issues by means of a seton, and the various antispasmodic and tonic medicines, such as valerian, assafoetida, musk, opium, hyoscyamus, and the different preparations of iron, copper, silver, or mercury, have been recommended. The misletoe, foxglove, and even arsenic, have been tried, and occasionally extolled.

Of the utility of all of those medicines in different cases ample testimonies have been exhibited, and

yet every candid practitioner must own, that cases from time to time are met with where every remedy proves of no avail. It is however a duty to make every possible effort to arrest the progress of so deplorable a complaint, and the unexpected recoveries sometimes witnessed should encourage practitioners to persevere, and parents not to despond.—If the mental faculties remain unimpaired, much may be done in lessening the frequency of the fits, by a proper regulation of what are styled the Non-naturals.

ST. VITUS'S DANCE—is the name given to involuntary gesticulations of the face and limbs, which cease entirely during sleep. For an accurate description of the progress and cure of this disease, the reader is, with great confidence, referred to the work on Purgatives of Dr Hamilton, senior.

It was well known to practitioners, that when those irregular convulsive affections occur during the febrile disorders of children, they are occasioned by irritations of the stomach and bowels, but Dr Hamilton, senior, was the first physician in this city who discovered that the same cause produces the chronic disease. Dr Underwood hints at this, and Dr Parr of Exeter had adopted the same idea above thirty years ago, and has mentioned, that the plan of giving repeated and powerful purgatives had succeeded in fifty-nine out of sixty cases. The coincidence on this subject between practitioners situated at such a distance from each other, affords a most satisfactory evidence of the efficacy of the practice.

CHAPTER III.

DISEASES COMMON TO INFANTS AND CHILDREN.

IN the two former chapters, the term INFANCY has been applied to the period which intervenes between birth and the complete protrusion of all the milk-teeth, and that of CHILDHOOD has been understood to comprehend the remaining years which precede puberty. Of the diseases described in those two chapters, some have been included under either of them, though they are occasionally met with both in infants and children; and in this chapter some disorders are detailed, to which adults as well as children are liable.—The reason for thus extending the observations to some of the diseases common to adults and children is, that the treatment of such complaints should be adapted to the period of life at which they occur, for what has been found most successful in grown persons proves in some instances most injurious in children.

SECTION I.

Anomalous Eruptions of the Skin.

BOTH infants and children are liable to eruptions of the skin, of various forms and appearances, of

which it is impossible to convey an accurate idea by mere description. Dr Underwood has, in this respect, done all that a perfect knowledge of the subject, and that language the most intelligible, by being divested of technical terms, could do, and yet it is believed that few practitioners even can recognise many of the eruptive disorders which he has enumerated. In fact, the delicacy of the skin of infants and children, subjects them to eruptions from very slight causes; and those eruptions assume various forms, apparently in consequence of the original constitution of the individual.

Some eruptions resemble measles, others are more like small-pox in some of its stages, some have the appearance of nettle-rash, and others of what has vulgarly been called scurvy, and technically herpes.—The appearance of some of them is preceded by symptoms of general indisposition, while that of others takes place without any previous warning.—A few occur after some febrile or inflammatory affection of the system, and seem to be critical.—Many of them are only of temporary duration: others continue for weeks or months.—Several of them occasion no distress after they appear, others keep up a constant degree of irritation till they decline.

All those eruptions, however different in appearance, may be divided into two classes, viz. those of a temporary, and those of an indefinite duration. The former are commonly ushered in with symp-

toms of general indisposition, the latter break out gradually without any derangement of the ordinary health. The former are owing to some disorder of the stomach or bowels, or some interruption of the usual excretions or secretions. The latter are probably, in most instances, the effects of some diseased condition or action of the lymphatic system, though sometimes they may be occasioned by a local affection of the skin itself.

This distinction is made for the purpose, not of aiming at the vain parade of science, but of explaining the practice. Where symptoms of indisposition, such as heat, restlessness, sickness or oppression, are followed by an eruption, a dose of some combination of antimonial and laxative medicines that shall both vomit and purge, together with the warm bath, should be first prescribed, and afterwards occasional purgatives and a suitable regulation of the diet are to be advised. But where the appearance of the eruption is unaccompanied by fever or marks of indisposition, some of the medicines called alteratives, and the daily use of warm bathing, particularly in sea water, should be recommended.

The medicines supposed to have an alterative power are, preparations of mercury, of antimony, of sulphur, and of neutral salts. But as mercurial preparations are always hazardous to children, the antimonial wine, or the sulphuret of antimony, or Harrowgate or Cheltenham waters, or some imitation of these, are the remedies to be chiefly depended up-

on. It is commonly necessary to order a protracted course of those medicines.

In some cases, other topical applications (besides the warm bath) are required, to allay the irritation arising from the excessive heat and itching of the skin.—The most efficacious are, decoction of bran, the tar ointment, lime water mixed with oil, a solution of potass, and the acetate of ammonia much dilute. The metallic solutions are too powerful to be employed, except upon very particular occasions.—Issues have been often employed in those cases, but experience has proved that purging answers better. Very distressing effects have followed the application of a blister, where there was a tendency to chronic eruptions of the skin.

SECTION II.

Glandular Affections.

INFANTS and children are liable to swellings both of the external and the internal glands. The external ones most commonly affected are those of the neck or throat, and of the groins. Of the internal, the mesenteric are more frequently affected than any other.

When a smart feverish indisposition is followed by a considerable enlargement and swelling of the

glands on both sides of the jaw, which occasions a slight difficulty of swallowing, the disease is called the MUMPS. Generally the febrile symptoms abate when the swelling takes place, and this latter does not subside for several days. If, by exposure to cold, it suddenly ceases in males, a swelling at the lowest part of the belly follows, and in females a swelling of the breasts.

There is reason to suppose the mumps to be contagious.—It is a harmless disease, little else being required than keeping the swelled parts warm by means of flannel, enjoining a vegetable diet, and directing a purgative to be given every third or fourth day.—Frictions have never seemed useful, and have certainly, in some constitutions, proved most injurious.

A sudden swelling of one or more glands of the neck or throat, accompanied by increased heat, thirst, pain, and restlessness, often occurs during teething, or after exposure to cold, or where there is some irritation on the skin of the head, or neighbouring parts.—In some instances it increases rapidly, its surface becomes red and shining, and it feels soft, as if matter were actually formed in it; and notwithstanding all these appearances, suppuration does not follow.—In other cases, the skin breaks, and the progress is that of a superficial boil.

Those swellings are not to be regarded as scrofulous, even where the child has a hereditary tendency

to that disease. A few doses of brisk purgatives, and an emollient poultice to allay pain, are the best prescriptions. Some parents object to the latter means as contributing to occasion humour, as it is termed, but experience has now proved, that the timely application of a warm bread and milk poultice, more certainly, on many occasions, checks the progress of inflammation, than any of the astringent solutions formerly in such general use.

SCROFULOUS swellings of the glands commonly begin gradually and imperceptibly, advance slowly, and, for a long time, are not painful even to the touch. After a certain period they evidently contain a fluid, but this is formed without any of the circumstances which usually attend suppuration. The skin (where the natural progress is allowed to go on) grows thin, and becomes discoloured and ulcerated, a sanious or ill-conditioned discharge follows, and when the glands do heal up, which often is not till after a long time, ugly scars remain.

In many cases, such swellings afford the first evidences of the tendency of the individual to scrofulous complaints. But sometimes thickness and tenderness of the eye-lids, swelling of the upper lip, and enlargement of the belly, take place before any swelling of the glands appears. The complications of this disorder are so numerous and so various, that a particular detail of them, with an explanation of the

treatment, would fill a volume. A few hints are all that can be offered in this work.

The progress of scrofula, when it has once begun in any individual, is always most uncertain. The skin, the ligaments, and the bones, may become successively affected. Sometimes soft circumscribed swellings of the skin, evidently containing fluid, suddenly arise in different parts, especially about the shoulders or extremities. In some instances these subside as rapidly as they had occurred, and one or more of the joints become affected, or violent cough with hectic fever, or dropsical affection of the belly, take place. More frequently these swellings proceed to ulceration, and after a tedious process heal.

Sometimes several little hard lumps, which occasion no pain, are seen on the skin. These gradually increase in size, grow soft and discoloured, and at last suppurate. In many cases different modifications of the disease occur successively in the same individual, and undermine the health.—It very often happens, too, that scrofulous sores which had resisted for years every plan of treatment, heal up spontaneously at the period of puberty.—Much danger is always to be apprehended where the hip-joint or knee are diseased, but large pieces of the bones are frequently affected without destroying life.

On the nature of scrofula much has been written, though very little that is satisfactory has been ascertained. That the tendency to the disease is,

in general, derived from the parents, is an unpleasant truth, which medical men are sometimes unwilling to state.—But that scrofulous affections can never happen unless there be some hereditary taint, has been assumed perhaps on too slight grounds. Every practitioner must have met with cases where long protracted low fever has induced a liability to such complaints, where not only there had not been previously any marks of a scrofulous constitution in the individual, but also where the parents had not the most trifling appearance of that disease.

Some isolated facts, established on the evidence of practitioners of the first respectability *, seem to prove, that the tendency may pass over one generation and be communicated to the next. This circumstance, on the first view rather contrary to the ordinary course of nature, may be easily reconciled with the opinion, that sometimes scrofula is an acquired disease. The tendency (or, in technical language, the predisposition) to disease, consists in a certain condition of the corporeal structure, and this peculiarity may be transmitted from one generation to another, for successive ages. This tendency may, from a variety of circumstances, remain dormant in one generation and be acted upon in the

* Treatise on Scrofula, by James Russell, Fellow of the Royal College of Surgeons, and Professor of Clinical Surgery in the University of Edinburgh.

succeeding one. The corporeal structure on which it depends must, however, be the same in all; and, in general, in the case of scrofula there are certain external characters by which this may be distinguished in any individual.

But if the children of parents, who not only never had any scrofulous affection, but who had none of the ordinary marks of predisposition to that disease, are occasionally found to have scrofula after some severe illness, which had greatly reduced their strength, there can be no doubt that hereditary tendency is not absolutely essential to its production.—This question relates to a subject of the greatest importance, because it must influence the practice in regard both to the prevention and the cure.

When the deplorable consequences of this malady are considered, it must be unnecessary to state any arguments to shew the duty of attending to its first approaches; and yet, if this rule were invariably observed, the health or life of many individuals would be annually saved. On this account, the most trifling mark of indisposition in children, who have any appearance of a scrofulous constitution, should be anxiously watched, and, if possible, immediately counteracted.

Affections of the stomach and digestive organs are usually, in such individuals, the first approaches to the disease. They most commonly happen after cold damp weather, or after some accidental indisposition.

An emetic, and two or three doses of an active purgative are to be premised, the lightest and most nourishing diet is to be recommended, all risk of exposure to cold and damp is to be avoided, a course of tonics is to be prescribed, and, where circumstances will permit, sea-bathing, and residence in the country in a dry situation, as soon as the weather is favourable, are to be advised. Preparations of zinc or iron are excellent tonics in many cases, but in others Spilsbury's drops have certainly been found superior to any other medicine. These drops are to be continued for at least two months at a time.

If, notwithstanding the above means, scrofulous affections actually appear, some preparation of antimony, in very small doses, or of neutral salts dissolved in water, should be suggested. The former of those are to be employed in infants, and the latter in children, especially towards the age of puberty.—The neglected remedy of the polychrest salt merits, according to the Author's experience, a decided preference to every other saline preparation. A small dose of Scrotrine Aloes or of Turkey Rhubarb should be given at bed-time, and such a dose of the salt, early in the morning, as shall procure three or four loose motions. This is to be continued for weeks, or for months; and it will be found, that instead of weakening the patient, it improves the strength, and alters very materially the appearance of the swellings or sores. After six or eight weeks the sulphate of iron may be given once or twice a-day, without interrupting the course of the salts.

The Peruvian bark is proper only where there are considerable discharges from the sores, or a threatening of hectic fever; and, in such cases, the myrrh, combined with preparations of iron, seems more useful. The muriate of lime has been found of the greatest utility in many very obstinate cases. In the early editions of this work, the Author could not recommend this medicine from his own experience, but he can now add his impartial testimony in favour of its efficacy.—In some cases of alarming complications of this disease, a cautious trial has been made of the foxglove, and of arsenic. The former has apparently done good, but the latter did not seem to produce any amelioration, either on the general health, or on the local affection; while it impaired the appetite, and the powers of digestion. Perhaps this might have been owing to the form, which was that of Fowler's tasteless ague drops.

Scrofulous swellings and sores require more attention than is usually paid to them; not that attempts to discuss or heal them should be hazarded till the operation of the remedies adapted to the general habit be obvious. But, after this is ascertained, no delay can be allowed.—In the usual treatment of the local affections, it has long appeared to the Author, that surgeons use too indiscriminately cold astringent applications, and much too sparingly the scalpel.—That cold water or sea-water, or solutions of metallic astringents, are often proper, cannot be questioned. But in many cases of extensive swelling,

with great hardness, the hemlock poultice, renewed every twelve hours, has a more powerful effect.

Popular prejudices prevail against any operation for giving a free outlet to the matter, when a fluctuation is perceived in the swelling; and to this prejudice surgeons have in general yielded with too much complaisance. If this subject be considered calmly, it will appear, that stagnant fluid must irritate materially the parts within which it is contained, and that the process by which a natural vent is occasioned, must be accompanied with a considerable loss of substance. These two circumstances combined, are the chief causes of the ugly scars which follow the healing up of scrofulous sores.—It is not, however, on speculative principles, that the Author often deems it necessary to recommend opening scrofulous swellings; for he has found by experience, that in many cases, by this practice, almost all mark has been prevented.—It is impossible, in this work, to point out with accuracy, the precise circumstances which should induce the practitioner to have recourse to an operation.

Another modern deviation from the ancient practice, which seems to have been carried too far, is the applying to scrofulous sores nothing else than superficial dressings; for, in many instances, some gently stimulating substance, introduced daily into the cavity of the sore, excites new actions on its surface, and thereby not only prevents any disease spreading into the neighbouring parts, but also contributes to the healing up of the original sore.

SWELLING OF THE MESENTERIC GLANDS is indicated by enlargement of the belly, emaciation and dryness of the skin, want of appetite and indigestion, with unnatural stools, and milky-like urine.—Where it occurs in infants, occasional vomiting, an almost perpetual fretting, a kind of uneasy pressure in breathing, and gradual wasting of the flesh, are the symptoms.—In children, hectic fever soon follows the complaints already enumerated. In both cases, the disease, though sometimes protracted for several months, most generally proves fatal.—After death, it is found, that the mesenteric glands are enlarged and thickened, in some instances in a state of actual suppuration, and in others containing a soft substance like new cheese, quite different from real purulent matter.

This disease certainly happens most frequently in children of a scrofulous constitution, but the real pus found within the glands in many instances, affords strong proof that it may take place in children of every different habit.—The exciting causes commonly enumerated are, irregularities of diet, inattention to cleanliness, exposure to damp and cold, and indigestion ; to which should be added, the torpor of the lymphatic system, that so often follows febrile and inflammatory complaints.

When the disease is discovered in its incipient state, it may be cured by means of a light nourishing diet, small doses of some preparation of antimony, immersion, for ten minutes, in the warm-bath

every night, before being put to bed, and opiate friction applied over the belly evening and morning.—Sea-water should be used for the bath, and anodyne balsam, or a mixture of one part of the compound spirit of ammonia, two parts of fine oil, and three parts of laudanum, form the proper opiate friction.—In some cases, after the hectic symptoms had appeared for several weeks, this plan has succeeded.

SECTION III.

Rickets.

THIS disease often begins during the cutting of the milk-teeth, but in many cases at first appears between the second and sixth year, after some febrile or protracted disorder, which has been followed by great weakness.

When it occurs during infancy, the first symptoms are, paleness of the face, and a swelling of the belly, with flabbiness of the flesh, relaxed skin, and evident aversion to exercise. If these circumstances be disregarded, the head in a short time becomes enlarged, spreading out towards the sides, and being flattened or depressed on the upper part, the back bone bends, and some of its joints project, the ribs sink in, while the breast bone is pushed out in the form of a ridge, and the large joints swell.—Pasty complexion, voracious or irregular appetite

for food, swelling of the belly, costiveness, or scanty evacuations by stool, and a hobbling or awkward manner of walking, mark the beginning of rickets in children.

The progress of the disease is very different in different cases. Sometimes, after the bones have become curved and the joints misshapen, the general health returns, and the only bad effect is more or less deformity. In other cases, hectic fever, accompanied by a short dry cough, occurs, and gradually destroys life. The more violent degrees are commonly complicated with scrofulous affections.—As there can be no difficulty in distinguishing the first approaches to rickets from every other complaint, if due attention be paid, and as it is a matter of the utmost importance to do so, the back bone and joints of puny infants or children ought to be examined from time to time with the most scrupulous care.

With respect to the nature of this disease, there can be no doubt that the softness of the bones is owing to their not being supplied with a sufficient proportion of the calcareous earth which forms their basis; but it has not yet been ascertained, whether the earth be not furnished by the system, or whether, after having been separated from the food, it be dissolved in the fluids with which it is mixed, from their being in an unnatural state. That disordered action of the digestive organs always attends

the commencement of rickets, is a fact of very material consequence to be kept in view.

There can be no doubt that this disorder is not exclusively confined to those who inherit a scrofulous tendency. It is well known, that impure air, inattention to cleanliness, irregularities of diet, and mismanagement of complaints of the bowels, have apparently excited it in individuals of every constitution.

The cure of this disease in its incipient stages, if not complicated with any modification of scrofula, may be accomplished by directing, in addition to the means already suggested for cases of chronic indigestion, the cold bath (with salt-water) every morning, and dry friction of the whole surface daily. But if the advanced stage have occurred, besides a steady perseverance in varied purgatives till the stools become natural, warm bathing, opiate frictions, and a course of tonics, are necessary. The opiate friction has seemed so efficacious, that in several cases, where the bones of the arms and legs had been actually bent before it was had recourse to, their natural shape was restored by it.

Foreign practitioners have extolled the powers of mercurials joined with antiscorbutics, in curing rickets, and chemists have proposed, for the same purpose, medicines capable of completing or correcting those chemical changes in the animal fluids, on which they imagine the disease to depend.—Experience has proved to the Author's convic-

tion the inefficacy of the former, and, on every principle of fair reasoning, the latter must be rejected; for the object should be, not to supply materials, but to alter the actions of the powers by which the component parts of the animal fluids are selected or combined.

Where one or more joints of the back jut out, an issue on each side of them, or the use of Jones's collar, which is a steel-bar so contrived as to take off the weight naturally supported by the spine, according to the state of the disease, have in many cases been successfully employed.—The late Mr Baynton of Bristol recommended, instead of those means, undeviating rest in the horizontal posture, continued for months or longer,—and the Author's experience has fully confirmed all the observations of that gentleman, on the utility of the practice, where the subjects of the disease are under six years of age. But it is his duty to add, that undeviating rest in the horizontal posture, is not alone sufficient for the cure, (which was Mr Baynton's opinion), and that various assisting means, according to the constitution of the patient, the degree of the affection of the bones, the state of the general health, &c. are necessary.

Slight degrees of RICKETS are apt to occur in young women, about the twelfth or thirteenth year, and require particular attention. Where one shoulder seems higher or larger than the other, the corresponding arm should be tied up for some months, and the other is to be exclusively employed. Where

there is a slight enlargement of any of the lower joints of the back-bone, or a trifling degree of bending of the same, steel stays, properly adapted, will be found most useful. But a great deal depends upon their being accurately fitted, and, perhaps, no tradesman should be trusted on this point. A medical practitioner ought to superintend the adaptation of the apparatus.

SECTION IV.

Croup.

THE TRUE CROUP is preceded commonly for some days, and always for a day or two, by a hoarse cough ; but the first symptom that proves alarming to one unacquainted with the disease, is a difficulty of breathing, which comes on towards night. The breathing is very difficult, and in many instances so noisy that it can be heard at the distance of several yards. After this state of the breathing is observed, the fits of coughing become more frequent, and have a very peculiar sound, resembling the loud crowing of a rousy cock. Generally the coughing occurs in redoubled fits, the second fit being more violent than the first. Some viscid phlegm is forced up by the cough ; but it reaches no farther than the mouth ; being retracted when the cough ceases.

If the countenance of the child be examined at

this time, it will be found flushed and swelled, in a degree proportioned to the constitution of the individual ; consequently, in some cases the eyes appear bloodshot, watery, and swelled as it were, and the whole face is very red, except that round the mouth there is an evident whiteness ; but in other cases there are only watery eyes, and an obscure blush over the face, with a slight paleness round the mouth.

The child sleeps during the intervals between the fits of coughing ; but there is no material alteration in the state of breathing while he is asleep. Those in whom the face is very much flushed seem overpowered by a heavy sleep, from which they are roused only by the violent fits of coughing. Food and drink are readily swallowed without difficulty, and the natural evacuations go on as usual.

In proportion as the disease continues, the fits of coughing return more frequently, and are attended with an uncommon degree of agitation throughout the whole frame ; and in some cases the breathing becomes more and more noisy. In one case which the Author attended some time ago, convulsions or convulsive startings followed every fit of coughing. At last the appearance of the countenance changes, the lips growing livid, the pallidness round the mouth becoming more striking, and the whole face turning of a leaden hue. Where the event proves fatal, it commonly seems occasioned by a fit of suffocation ; and this often happens quite unexpectedly to the attendants.

During the whole course of the disease the child is extremely fretful ; but when irritated, he seldom cries for any length of time. This appears to arise partly from the uneasiness in breathing being aggravated by the fits of crying, and partly from his being unable to direct his attention to any object whatever above a few minutes at a time.

The progress of the disease is very different in different cases, for it sometimes runs through its course in twenty-four hours, and sometimes it is protracted to the tenth day or even later. The progress seems to correspond with the frequency and violence of the fits of coughing.

When a child recovers from this disease, it continues for some time extremely liable to a return of the disorder ; and if a second attack should occur within a few days from the cessation of the former, there is very great risk of its proving suddenly and rapidly fatal.

The true croup occurs only during cold damp weather, except in marshy places, where it is apt to happen at any time when a foggy state of the atmosphere prevails.—The ordinary subjects of the disease are those children who have enjoyed the best health ; and the most common period of life at which it takes place, is from the fifth month to the fifth or sixth year.

Inflammation of the membrane which lines the windpipe is the immediate cause of this disease. In consequence of this, matter is formed, which concretes and chokes up the passage to the lungs. This

concreted matter has been on some rare occasions thrown off by vomiting, and has relieved the child from threatening suffocation.—Some practitioners have supposed the disease to be contagious, because two or three children in the same family have fallen victims to it within a few days. They have overlooked, that in such cases all the children had been exposed to the same exciting cause, viz. a damp and cold state of the atmosphere. The proof that this is the sole exciting cause is, that the disease never occurs in any other condition of the air ; and it is a curious and instructive fact, that in proportion to the dampness of the atmosphere, is the violence of the disease. Thus, in Leith it is more severe than in Edinburgh ; and in some marshy districts it is much more violent than in Leith.

There is an affection resembling this disease which may be styled *spurious croup*, and which is very analogous to the asthma of grown people. It comes on suddenly, without any previous indisposition, in the form of very difficult breathing, occasioning fits of croupy coughing, unaccompanied with the appearance of tough phlegm in the throat or mouth. The countenance is little altered during this affection ; and during the fits of coughing there is not that excessive agitation which is so strongly marked in the true croup.

Spurious croup affects delicate, much more frequently than robust children, and occurs during any

state of the weather. Its duration is in general limited to a few hours ; and in many instances it ceases entirely for many hours, or even for a day or two, and then recurs, so that a child may have several attacks within a short time. There can be no doubt that the spurious croup has on some very rare occasions proved fatal ; but in general it is unattended with danger. It seems to arise from a spasmodic affection of the windpipe, and is often a sympathetic disease arising from some disorder of the stomach or bowels. As it is extremely difficult in some cases to distinguish, at the beginning, the true from the spurious croup, it is a fortunate circumstance that the following method of treatment is applicable to both diseases.

Immediately upon the attack the child must be put into a tub of water, heated to the ninety-sixth or ninety-eighth degree of Fahrenheit's thermometer, (that is, to the degree which the hand immersed in it can easily bear), or must be wrapped up in a blanket wrung out of hot water. Whether the bath or the fomentation be employed, it ought to be continued for at least ten minutes ; and then the child should be carefully rubbed dry, wrapped up in warm flannel, and put to bed.

A dose of calomel is now to be given, and repeated every hour till the breathing be evidently relieved ; when it is to be gradually discontinued, allowing at first two, then three, and finally four or five hours to intervene between each dose, according to

the state of symptoms.—This medicine commonly occasions both vomiting and purging; and in true croup, the first alleviation of symptoms generally follows the discharge of a great quantity of dark green-coloured matter (like boiled spinage) by stool. But if the attack have been that of spurious croup, the difficulty of breathing ceases after vomiting has occurred, in which case that medicine is to be instantly discontinued.

If the disease by its obstinacy evidently prove to be the true croup, in all cases where the symptoms are violent, bleeding either from the jugular vein, or by means of a great number of leeches, and the application of a blister to the breast, are to be had recourse to, and the calomel is to be persevered in.

The dose of calomel is to be regulated principally by the age of the little patient. During the first year it should be from one to two grains; during the second, two grains and an half; during the third and fourth years, from three to four grains; and during the fifth and sixth, from four to five grains. It may be given mixed with a little sugar as a dry powder, or it may be mixed with currant jelly, or honey, or treacle, or potage, or panada, or light pudding, or with any thing which is thick: but it cannot be given in drink.

During the course of the disease, nothing else than liquids ought to be allowed to the child. These should consist of cow milk whey, very weak tea, thin barley gruel, fig tea, apple tea, milk and water, or

toast and water.—It may be unnecessary to remark, that if the infant be not weaned, nothing but the nurse's milk should be given. The room in which the little sufferer is placed ought to be kept moderately warm, and should be in the most elevated floor of the house.

When the disease has begun to yield to this treatment, nourishment suited to the habits and circumstances of the infant is to be exhibited in small quantities, and often repeated.—In some cases considerable weakness remains after the crouping has ceased, in consequence partly of the violence of the symptoms, and partly of the operation of the calomel. Under such circumstances, cordials, particularly weak white wine whey, and a blister to the breast, become necessary. But if proper attention have been paid to the precaution of lessening the number of doses of calomel, whenever the disease is in the least alleviated, the ordinary health of the child will be found restored within a very short time after the symptoms of croup have disappeared.

The practice of giving calomel in this disease was first adopted by the American practitioners, but for some years after the author entered on his professional duties he was unwilling to sanction this plan, having seen several cases, where calomel was trusted to, prove rapidly fatal. He was at last, however, about twenty years ago, induced to give it a fair trial, at the recommendation of an old pupil, now dead, and was surprised and gratified by the result of the

practice.—He had reason indeed to be convinced, that the practitioner alluded to had employed it by mistake in cases of spurious croup only, for he had asserted that it cured the disease, though repeated not more frequently than evening and morning, and though it produced no sensible operation.—The Author found, by exhibiting it in the manner described, that it rendered bloodletting unnecessary, and it seemed so very successful, that, in the course of twelve years, it failed in no more than three cases, and in those instances it had no effect whatever on the bowels.

It would be uncandid to conceal, that more extensive experience has now led the Author to believe, that the calomel alone is only useful in those mild degrees, which usually prevail in this city; and that, in all *violent cases*, bleeding ought to be had recourse to, and to be repeated according to circumstances, and that the calomel should then be employed as an auxiliary.—He has for some time combined preparations of antimony with the calomel.

SECTION IV.

Measles.

A REGULAR history of MEASLES would be misplaced in this work, and therefore the following observations are limited to two points, which are certainly of the utmost importance, viz. to the method

of distinguishing this disease from every other, and to that of treating it when it occurs in infants and children.—On those subjects, it is believed, some most erroneous opinions are entertained by general medical practitioners.

It has been already stated, that from the extreme delicacy of the skin which prevails during the first two or three years of life, eruptions resembling the measles, attend many of the accidental feverish or catarrhal complaints of infants and children. This alone has given rise to the popular notion, that measles may affect the same individual oftener than once, for there is no authentic evidence in support of such a fact. It has indeed been alleged, that measles may occur without fever, but this is an absolute contradiction in terms. All medical men having, in modern times, agreed to call a certain eruptive fever by this name, nothing can be more absurd, than to apply the same name to an eruption without fever. As it frequently happens, however, that in infants and young children, eruptions like the measles are at first attended with fever, it is only by examining with care their progress and duration, that an accurate distinction can be made.

The colour of the eruption in measles is at first that of raspberries; at the end of the second day, from its extending over the whole surface, it changes to a brownish red, which continues distinct during the third day; and after that time it gradually turns pale, and the skin becomes covered with branny

scales like fine oat-meal. When, along with this regular progress, there is catarrhal fever, with an affection of the eyes and nose, there can be little doubt respecting the nature of the disease; but wherever there is any material deviation from this succession of changes, it should be concluded that it is not a case of measles.

When, from the prevalence of this disorder in any particular place, (and it generally appears as an epidemic every year in large cities), there is reason to suspect that symptoms of indisposition in any individual mark its approach, the stomach and bowels should be immediately cleared out, by means of an emetic and a purgative, after which the child should be put into the warm bath. It is a vulgar prejudice that a heated apartment is necessary during the course of the disease, for nothing adds more to the oppression, and consequently to the danger of the child. Exposure to a cold stream of air might increase the inflammatory affection of the lungs, which, in a certain degree, occurs in this complaint, but a moderate temperature of the atmosphere by which the patient is surrounded, tends to permit the eruption to come out freely, and to lessen the feverish irritation.

Plentiful dilution by means of barley-water acidulated, or cow milk whey, or apple-tea, or any of the ordinary acescent drinks, and an open state of the bowels, are necessary as long as the eruption continues distinctly visible. If the cough and op-

pression of breathing be urgent notwithstanding this treatment, a more active purgative is to be given, and a blister is to be applied to the chest. If there be sense of tightness in the forehead, and sense of roughness in the throat, the frequent inhaling of the steams of hot water affords very immediate relief. In every case the eyes are to be bathed several times a-day with warm milk and water, and the apartment is to be kept rather darkened.

On the declension of the eruption the skin should be sponged two or three times a-day with warm milk and water, and a powerful laxative should be directed every third or fourth morning.—As soon as the state of the cough will permit, nourishing diet, with wine and tonics, of which a combination of myrrh and bark is the preferable, are to be allowed.—Violent or very frequent fits of coughing, with wheezing or considerable oppression in the chest, require a succession of blisters, repeated purgatives, and a milk diet; but a short dry cough, even though accompanied with frequency of pulse, yields to the use of tonics.

If quick or laborious breathing, with a rapid or thready pulse, and a torpid drowsy state, with a swelled or pasty appearance of the countenance, supervene on the decline of the eruption, opiates, wine, and other cordials, with blisters and external stimulants, afford the only chance of saving life.

To these short practical hints must be added, the unpleasant duty of pointing out the errors frequent-

ly committed in the treatment of this disease, a task, on which no other consideration could have induced the Author to enter, than the conviction, that many infants and children are lost by such errors.

The first of these to be noticed, is the indiscriminate practice of bloodletting. Practitioners have been led to this, partly by the theoretical notion that there is danger of pneumonic inflammation, and partly by the success which attends it in grown people. But what according to the experience of every unprejudiced practitioner is most to be dreaded as the effect of measles in children, is the debility that follows ; and, accordingly, numerous instances have fallen under the Author's observation, where hectic fever, or dropsical or scrofulous affections, were induced by bleeding. For a long time, therefore, he was accustomed to state, in lecturing on this subject, that " he did not deny the possibility of bloodletting being necessary in the treatment of this disease, but that he had never yet met with an instance where he found it so."—The late Dr Erskine, whose talents and candour it is unnecessary to detail, first pointed out a case where that necessity was well marked, and since that time the Author has seen a very few instances where he had no hesitation in sanctioning bloodletting.

Dr Parr of Exeter has supported, by his high authority, the opinion which the author has always held on the bad effects of indiscriminate bleeding in this disease.—In allusion to the possible propriety

of that evacuation, he says, " No such instance, has, however, occurred to us in an extensive practice, nor to those from whom we learned it, whose practice, equally long, has been more extensive."*—Had this flattering testimony related to a subject of mere speculation, it should not have been quoted in this work ; but when he considers the importance of the question, and the reluctance with which many most respectable practitioners have been led to relinquish the established practice of bleeding, the Author feels highly gratified in being able to shew a coincidence, which could only be the result of experience.

In these modern times, the use of purgatives, after the declension of the eruption, has been as much condemned as bleeding. Even Dr Cullen has sanctioned this prejudice.—The ancient opinion was, that purging tended to remove the dregs of the disease, which has been very justly ridiculed by Dr Cullen ; for the proper effect of purgatives in such cases is the removal of that torpor of the lymphatic system on which both dropsy and glandular swellings depend.—Dr Parr asserts, that if laxatives be steadily persevered in from the beginning, the peripneumonic symptoms which occur about the eighth or tenth day will certainly be prevented.—The most alarming case of symptomatic dropsy in a child, to which the Author was ever called, was the effect of inattention to this practice.

* Medical Dictionary, vol. ii. p. 210.

As the debility which always attends and follows measles, is the most prominent feature in the progress of the disease, it is not easy to understand the reasons why practitioners have been led to overlook so obvious a circumstance.—The objections to wine and nourishing diet, which it is so often necessary to combat, probably arise from the supposition, that the frequency of the pulse and the cough are the effects of inflammation, when, in fact, they are occasioned by the torpor of the lymphatics. If attention be paid to all the circumstances of the disease, this cannot appear doubtful to any unprejudiced inquirer. The aphthæ, the putrid diarrhœa, the dropsical and glandular affections, and the gangrene which is apt to take place on blistered parts, afford such unequivocal evidences of debility, that no other than a descendant of the renowned Sangrado himself could overlook them.

AN ANOMALOUS FEVERISH DISORDER, resembling, at first, the measles in every respect, is occasionally met with. Within about twenty-four hours from the eruption having come out, the feverish symptoms are highly aggravated, attended with delirium, startings, and even convulsions; and on several parts of the skin, particularly on the face, the eruption recedes, leaving large portions of the surface of a pale yellow, with a small white blister or vesication in the middle. The eruption disappears in a day or two, and, under proper treatment, the fever soon abates.

The alarming appearance of great determination to the head, in the first case or two of this kind to which the Author was called, led him to apply leeches to the temple, at the same time that he prescribed the warm bath, a brisk laxative, and a blister to the back. Since that time he has omitted the leeches ; and although the utmost danger seemed to threaten in all the cases he has witnessed, the recovery has been rapid in every instance.

SECTION V.

Scarlet Fever and Sore Throat.

THIS VERY INFECTIOUS DISEASE is now so well known, that a regular description of it is unnecessary ; all that seems proper in this work being a very few observations on the method of treatment in infants and children.

However slight the symptoms may seem, if the eruption on the surface, and the appearance of the tongue and throat, prove the disease to be really SCARLET FEVER, every proper precaution ought instantly to be adopted, to prevent the spreading of the infection, as the violence of the disorder differs in individuals exposed to the same degree of infection.

At the beginning, an emetic, though it does not cut short the progress, as some fanciful physicians

have supposed, certainly alleviates the sufferings, and can never be injurious.—If the heat of the skin be excessive, sponging it frequently with cold water, or with a mixture of cold water and vinegar, tends greatly to abate the fever, and to promote rest.—It is a much safer practice than what has been technically called *cold affusion*, viz. pouring a quantity of cold water on the naked body, because several instances have occurred, where breathlessness, with sudden sinking of the living powers, have quickly followed the use of that remedy.—That in many cases no injury has ensued, and that the progress of the *scarlet fever* has often seemed to be instantly, as it were, arrested by the cold affusion, may be satisfactorily explained; for, it is probable, that in the majority of cases, where *scarlet fever* occurs independent of an affection of the throat, the disease, if left entirely to nature, would prove slight and transitory. It is a safe rule in the treatment of diseases, to consider one positive fact to be of more value, in elucidating the appropriate means, than a hundred negative ones.—Thus, if in one case of a hundred, the cold affusion produce decidedly mortal effects, it is not unreasonable to conclude, that in the other cases it had had no influence whatever on the disease.—In no instance within the Author's knowledge, has any bad consequence followed the *cold aspergion*.

If considerable fever, with pain of the head, or flushed face, or slight delirium, attend at the begin-

ning, the application of leeches to the temples is indispensable. This was formerly practised in every case whatever; and the bad effects of its indiscriminate use led, several years ago, the most judicious of the profession here to discontinue it.—That bleeding in many cases is most injurious, is now ascertained beyond the possibility of doubt; but that cases now and then occur, where it contributes to the mitigation of the symptoms, and eventually to the safety of the patient, the Author is convinced from much experience.—He admits that it is often very difficult to decide on the propriety of the practice, and he has occasionally seen the most experienced of the profession puzzled on this point.

While there is no affection of the throat, the skin, on the declension of the eruption, should be sponged every six or eight hours, with warm milk and water, and the bowels ought to be kept open, by means of laxatives, while wine, and suitable nourishment, are still to be continued.—Spontaneous looseness seldom proves troublesome or injurious, unless where the state of the bowels had been neglected at first.

In those violent degrees of *scarlet fever*, which are attended with an affection of the throat, the great obstacles to success are, the impossibility of getting the throat properly and frequently gargled, and the excessive reluctance to take the cordials which the urgency of the symptoms require.—For

these reasons, it often happens, that all that can be done during the dangerous period of the disease, is to regulate the ventilation, and to apply a succession of external stimulants.—Bark glysters, where they can be given, without occasioning fatigue from the struggles of the child, ought to be frequently exhibited.—But if the child can be persuaded to take wine, or other cordials, in the proportion required, which varies according to the severity of the disease, the best chance is afforded of a successful event.—In a great school in Yorkshire, where the head master, Dr Binns, had been formerly a practising physician, it was found that children under fifteen years of age, affected with this disease, required, within the twenty-four hours, sometimes not only a bottle of port wine, and another of raisin, but also a proportion of brandy.

On the steady use of purgatives, the prevention of glandular diseases, and of dropsical affections, chiefly depends.—A swelling of one or more glands of the neck is apt to appear, when the sloughing of the throat is nearly completed; and a fluid, as if from suppuration, is soon perceivable in it.—But this is generally dispersed, after one or two doses of rhubarb and jalap, or powdered senna and jalap.—In some cases where croup had supervened to this disease, a combination of wine, cordials, opiates, and blisters, with large doses of purgatives, repeated every hour, till relief was procured, seemed to save life,—though several instances have also fallen un-

der the Author's notice, where the fatal event suddenly followed the occurrence of that symptom.

There is a very dangerous, but, fortunately, rare modification of sore throat, which, as far as the Author's reading goes, has not been described, at least intelligibly, in medical writings.

It begins in the form of a whitish spot, like that of thrush, (though more definite in its shape, being round or oval), on one or both tonsils, unaccompanied, at first, by fever, and attended with only a trifling degree of uneasiness in swallowing. By and by this spot enlarges,—its edges become of a florid colour, fever steals on, and the act of swallowing grows painful. A slough gradually forms, with evident ulceration at its edges, the fever increases, and headache and restlessness supervene.

The partial separation of the slough, together with the rosy colour of the edges of the ulcer, with the moderate degree of fever for some days, seem to promise a favourable issue. But very unexpectedly slowness of breathing, without either difficulty or wheezing, takes place, with excessive and sudden sinking of the living powers, and it generally happens, that within a day from this change the fatal event takes place. The breathing at first falls to eighteen respirations in the minute, then to sixteen, to twelve, and, finally, to ten or eight. Sometimes with the sloughing the tonsil swells, and, in some cases, both tonsils are affected.

Hitherto, with one exception, this disease has proved mortal in every case in which the Author has been consulted, and he considers the slow breathing to be a sure symptom of the fatal termination.

With respect to the nature of the disease, his experience is too limited to enable him to give a decided opinion. He has repeatedly known two individuals of the same family attacked, in succession, with the disease, but he does not feel warranted in pronouncing it to be infectious.

It is with feelings of sincere regret that he has to state, that no mode of treatment yet discovered seems to have any influence in checking the progress of this disease. The most powerful local applications, such as stimulating gargles, the use of caustic, &c. and all the ordinary means of supporting the strength, have, in the cases to which the Author was called, been pursued with much anxiety and activity, without any benefit. The operation of opening the windpipe was, in one interesting case where, from the swelling of both tonsils, there was apparently a mechanical obstruction to the breathing, had recourse to without any avail.

SECTION VI.

Water in the Head, and other Dropsical Affections.

UNDER the title of WATER IN THE HEAD, three diseases, different from each other in their nature,

although similar in one respect, have been generally comprehended.

The first is an affection of the head, coeval with birth, which may be styled the *congenite water in the head*.—Of this disease the chief mark is, an evident enlargement of the head, with uncommon openness of its sutures, that is, of the connections between its bones. This is met with in various degrees; for sometimes the size of the head is so great, and the collection of water so enormous, that the infant cannot be born alive; in other cases, the enlargement is just perceptible, and at first seems to have little influence upon the health of the infant: and between these extremes every intermediate degree has occurred.

In general, where the disease is quite evident at birth, the size of the head continues increasing for ten or twelve months; and then the child is destroyed by convulsions.—But cases have occurred where life has been protracted for several years. Under such circumstances, the sufferer has dragged out a most miserable existence, having been incapable of any mental exertion, and also, in most instances, of any bodily exercise.

This disease seems to be owing to some original imperfection in the structure of the individual; and, as far as human experience had evinced, previous to the former editions of this work, had been found to resist the most active medical treatment. Blisters

to the head, issues in different parts of the body, the various preparations of mercury, and other powerful means, had been often tried, without any appearance of even mitigating the symptoms.—But, within these few years, two instances have occurred, in which the disease was arrested in its progress, by the use apparently of external stimulants applied to the head. In both cases, the size of the head was pretty rapidly diminished, and in one at least the general health of the individual was for a time restored. In that latter case the disease, however, proved fatal.

The second disease known by this name, may be termed the SYMPTOMATIC WATER IN THE HEAD. It is the natural effect of any weakening disease in infancy or childhood, just as swelling of the feet and ancles takes place in grown persons who are much debilitated.

In consequence of the large proportion of blood which circulates through the head of infants and children, every complaint which occasions any irregularity or inequality in the action of the heart and bloodvessels, produces an effusion of watery fluid into the cavities of the brain, more readily than in any other part of the body. The effect of this effusion is commonly stupor, and eventually convulsions. In this way, fevers, many inflammatory complaints, and, in short, all diseases which are protracted for any length of time, terminate; and as it is found after death, that water is accumulated within the brain,



superficial observers are apt to imagine, that what in fact is the effect of the previous indisposition, had been the original cause.

Symptomatic water in the head has been sometimes cured by supporting the strength, and at the same time employing the more powerful remedies for dropsical affections. The means for both purposes ought to be exceedingly active, as there is generally no time for trifling.

The third disease known by this title has been usually called the IDIOPATHIC WATER IN THE HEAD, and more often takes place in childhood than in infancy, although instances of its occurrence in the latter are occasionally met with.

When infants are afflicted with this disease, the first symptoms are commonly those of teething, after which a great degree of torpor, with obstinate costiveness, frequent startings, and in some cases convulsions, suddenly come on. The fatal event often follows with great rapidity, so that an infant who had been observed to be only a little indisposed, has been known to die of this disease within the course of three or four days.

In children, the approaches of this formidable complaint are more gradual and more insidious. Slight headach, or pain about the shoulders, attended with languor, dulness of the eyes, and costiveness, with disturbed sleep, now and then take place for many weeks, often while the general health does not

appear affected ; so that the first circumstance which alarms the attendants in many cases, is an aggravation of the headach, accompanied by sickness and constipation, or frequent screaming during the night, as if from being awakened by a frightful dream, or irregular feverish symptoms, with considerable dilatation of the pupils of the eyes, and occasional squinting.

Soon after this, the pulse in most cases becomes evidently affected, being either unusually slow or intermitting. The child now complains almost constantly of pain in the head, commonly confined to one part, and of intolerance of light, and has also frequent retching, and most obstinate constipation. In a few days the inequality of the pulse ceases, and is succeeded by great frequency and feebleness ; the appetite for food returns, insomuch, that whatever is offered is greedily swallowed ; the pupils of the eyes are more and more dilated, and the vision proportionally impaired, till at last double vision, and finally blindness ensue. Stupor, with stertorous breathing and horrible screamings follow, and are terminated by convulsions, which soon destroy the child.—The progress and combination of these symptoms are very different in different cases. Sometimes the disease has proved fatal in the course of a few weeks, and sometimes it has been protracted for several months.—In those latter cases the subjects of the disease are above eight years of age. They gradually decline in health, and even after

serious marks of indisposition occur, the symptoms are not exactly similar to those which happen at an earlier period of life.—Occasional deep sighing, and inequality of breathing, are the characteristics of this affection.

It is often extremely difficult to distinguish this disease, for many of the symptoms resemble those occasioned by worms or by irregular fevers.—In every case, there are excessive torpor of the bowels, with irregularity of the pulse; but as such symptoms are occasionally the effects of some disorder of the parts concerned in digestion, they cannot be regarded as characteristic marks; and, accordingly, every candid practitioner must allow, that the precise nature of the indisposition in many instances is only manifested by the progress or event.

Whether an increased determination of blood to the head be the chief cause of this disease, or be a link in the chain of causes, the observations of several most respectable practitioners concur in proving that it precedes the alarming symptoms. As this is often the effect of very slight injuries from falls or blows, parents, and those who have the charge of children, ought to attend most particularly to every accident of that kind, however trifling it may appear at the time to be.—The application of leeches to the temples, opening the bowels by some cooling medicine, and keeping the child upon a milk and vegetable diet for some days, can almost never do any harm, and may often prevent the most

serious complaints. In the course of the Author's practice, he has seen several very well marked instances where the disease could be traced to such accidents.

In the treatment of idiopathic water in the head, the most active means ought to be employed as early as possible ; for after a certain time the disease is quite incurable. Bleeding, blistering, preparations of antimony with powerful purgatives, and in some cases the foxglove, are severally necessary.—When parents have unfortunately lost one or two children in consequence of this disease, it was formerly customary to direct, as a precautionary measure, that every future infant should have, during the period of teething, an issue established on the head or back. But an occasional succession of blisters seems a preferable practice.

DROPSICAL affections of the skin of the belly or of the chest, are apt to occur in infants and children, after any violent or protracted indisposition, but particularly after measles or scarlet fever.—In those latter cases, they may be commonly prevented by attention to the use of purgatives and tonics, as already recommended.—Slight degrees of dropsy may be removed by a brisk laxative, followed by a dose, three or four times a-day, of the dulcified spirit of nitre, and nourishing diet. In the more alarming degrees, the foxglove, in the form of the saturated tincture diluted, repeated every hour till

it take effect, has been found particularly successful. It may seem very unnecessary to remark that a remedy of such deleterious qualities ought never to be continued longer than necessity absolutely requires.

APPENDIX.

No. I.

Qualifications expected in a Hired Nurse.

I. THE first requisite should be, a sound healthy constitution, free from all hereditary tendency to disease. It is not believed that nurses can communicate the tendency to certain complaints, as scrofula, &c. which they themselves possess merely in consequence of corporeal structure ; but it is not probable that, in such women, the milk can be healthy.

II. Nurses should be of a certain age ; when too young, they cannot pay the attentions which the infant may require, and when too old, their milk is seldom sufficiently laxative. Between the years of twenty and thirty-five constitutes the proper age for a hired nurse. But exceptions to this rule are occasionally met with.

III. The same remark may be applied to the next qualification, viz. that the woman should have already appeared with advantage in the capacity of a nurse. There are two reasons for adopting this as the general rule ; *first*, Infants require many little attentions, which can only be learned by experience ; and, *secondly*, Most women in Scotland, when nursing their first born, menstruate between the fifth and seventh month, and from that period their milk becomes deficient both in quality and quantity.

IV. Good breasts, prominent nipples, and plenty of healthful milk, are most essential points. It is not easy, how-

ever, to ascertain either that the milk is abundant, or that it is sufficiently nourishing, except by looking at the woman's own child, and having reason to know that it had been fed chiefly on its mother's breast. The sensible qualities of the milk do not invariably afford evidence of its goodness, on which account it is a proper precautionary measure to stipulate with every hired nurse, that unless her milk prove sufficiently nourishing and laxative, her engagement is not to hold.

V. The last circumstance which ought to be attended to, regards the disposition of the nurse's mind. If she be liable to sudden gusts of passion, her milk may be often so much altered as to occasion bowel complaints, or even convulsions, in the infant. And if she be of a sulky reserved temper, a certain degree of the same is apt, for the time at least, to be communicated to the baby. A good disposition, amiable temper, and a cheerful smiling countenance, are what should be sought for in a hired nurse.

No. II.

On the Method of Measuring the Doses of Medicine.

LIQUID MEDICINES are commonly prescribed in the doses of table-spoonful, tea-spoonful, or drops. But an exact dose can never be given by those measures; for table and tea spoons are very various in size; and fluids poured from a phial fall out in large or small drops, according to the thickness of its edges, or to the quantity of its contents. On this account, a glass measure, both for drachms, ounces, &c. and for drops, ought to be used in every family in the country;

and in the following directions it is assumed that a table-spoonful contains half-an-ounce, a tea-spoonful one drachm, and one drachm sixty drops, or what are now styled *minims*.

The doses of powders and electuaries should be ascertained by weight, for which purpose a set of apothecaries weights is to be employed.

No. III.

Medicines for Grown Persons.

ABSORBENTS.

MAGNESIA—may be mixed with water or milk.

Dose, from ten grains to half a drachm every four or six hours, while necessary.

PREPARED CRABS' EYES—may be given in the same manner as magnesia. Dose, fifteen or twenty grains every hour or two.

LIME-WATER.—Dose, four ounces twice or thrice a-day.

ABSORBENT MIXTURE.—Take of

Refined Sugar one drachm,	} of each two drachms.
Prepared Crabs' Eyes,	
Magnesia,	

Rub them well together into a fine powder. Then add of

Simple Cinnamon-water, one ounce,

Common water, five ounces.

Dose, A table-spoonful.

ANODYNES.

OPIUM.—Dose, One, two or three grains.

OPIATE PILLS.—Take of

Pure Opium, and

Powder of Cinnamon, equal parts.

Form these, by means of Syrup, into pills of one grain each.

Dose, from two to six at bed-time, and, in particular cases, one or two in the morning.

LAUDANUM.—Dose, from twenty to sixty drops once in twenty-four hours. When it disagrees in the ordinary quantity, it may often be given with much advantage in doses of five drops every hour, till the proper effect be produced.

When laudanum is prescribed by way of *Lavement*, the proportion must be more than double what can be given by the mouth.

EDINBURGH PAREGORIC ELIXIR.—Dose, from forty to eighty drops in a cup of water or gruel.

LONDON PAREGORIC ELIXIR.—Dose, one or two drachms.

RUSSIAN CASTOR.—This medicine must be always used fresh powdered.—The dose is twenty or thirty grains once in twenty-four hours, given in marmalade or jelly.

TINCTURE OF HYOSCYAMUS.—Dose, three or four times the dose of laudanum.

ANODYNE DRAUGHT.—Take of

Laudanum thirty-five drops,
Common Syrup two drachms,
Simple Cinnamon water, six drachms.

Mix them together.

This medicine is to be taken at once.

ANODYNE MIXTURE.—Take of

Laudanum one drachm,
Tincture of Saffron one ounce,
Common Syrup half an ounce,
Water two ounces and an half.

Mix them together.

Dose, two table-spoonsful at bed-time, and one every five or six hours while pained.

OPIUM PLASTER.—To two ounces of the Stomach-plaster of the London Dispensatory, add two drachms of pure Opium.

To be spread on a piece of leather.

OPIATE LINIMENT FOR PILES.—Take two drachms of opium and as much of fine olive-oil ; after having rubbed them carefully together, add two ounces of spermaceti ointment, so as to make a soft liniment.

ASTRINGENTS.

For Internal Use.

OAK BARK (in Powder).—Dose, twenty grains twice a-day in currant-jelly or marmalade.

PERUVIAN BARK.—Dose, from half a drachm to two drachms twice a-day, in water, in port-wine, in currant-jelly or in a piece of sheet-wafer.

ELIXIR OF VITRIOL.—Dose, fifteen or twenty drops twice a-day, in a glass of spring-water, taking care after every dose to rinse out the mouth with milk and water.

ASTRINGENT DECOCTION.—Take of

Cinnamon two drachms,

Peruvian Bark one ounce,

Spring Water three English pints.

Boil these together till only one-half remains ; then strain off the liquor after it has cooled, and add,

Weak Acid of Vitriol one drachm,

Nutmeg-water, or Duch Cinnamon-water, one ounce.

Dose, two ounces twice a-day.

STRONG ASTRINGENT DECOCTION.—Take of

Canella Alba two drachms,

Peruvian Bark, }
Oak Bark, } of each half an ounce,

Spring Water two English pints.

Boil these till one pint remains, pour the liquor clear off,
and add the same materials as to the former decoction.

Dose, two ounces twice a-day.

ASTRINGENT INFUSION.—Take of

Dried Scarlet Roses a handful.

Pour on these a quart of boiling water.

After four hours, strain off the liquor, and add—

Weak Acid of Vitriol half a drachm,

Syrup of Roses one ounce.

Mix them together.

Dose, one or two table-spoonsful, every two or three hours,
according to circumstances.

ASTRINGENT MIXTURE.—Take of

Laudanum one drachm,

Confection of Catechu, }
Refined Sugar, } of each two drachms.

Rub these together in a glass mortar, and add,

Of simple Cinnamon-water one ounce,

Spring-Water three ounces.

Mix them.

Dose, a table-spoonful, every three hours, diluted with
as much water.

ASTRINGENT POWDER.—Take of

Powdered Ginger fifteen grains,

Rock Alum half a drachm,

Kino (*Gum Kino*) two drachms,

Catechu (*Japonic Earth*) one drachm.

Rub these together into a very fine powder.

Dose, ten grains every two or three hours, in marmalade
or treacle.

For External Use.

SOLUTIONS OF SUGAR OF LEAD—are of different degrees of strength. The weak solution consists of two grains, and the strong one of ten grains to an ounce of water. One part of distilled vinegar to three parts of water adds greatly to the strength.

WEAK ASTRINGENT LOTION.—Dissolve half a drachm of White Vitriol in an English pint of spring-water.

STRONG ASTRINGENT LOTION.—Dissolve two drachms of Common Alum in an English pint of spring-water.

ASTRINGENT DECOCTION.—Take of

Oak Bark two ounces,

Spring-water, two English pints.

Boil into one pint; to which, when strained, add,

One drachm of Alum.

BITTERS.

COLUMBO POWDER.—Dose, ten grains twice a-day in marmalade or peppermint-water.

INFUSION OF CHAMOMILE.—Take of

Chamomile Flowers, dried, a handful,

Pour on them a quart of spring (cold) water.

After twenty-four hours strain off the liquor.

Dose, a small tea-cupful twice a day.

BITTERS FOR INFUSION IN WATER.—Take of

Dried Yellow Rind of Seville Orange, two drachms,

Root of Sweet-scented Flag,

Root of Gentian, of each half an ounce.

Pour on these one quart of boiling water, and strain off, after thirty-six hours.

Dose, a small tea-cupful.

BITTERS FOR INFUSION IN WINE.—Take of

Lesser Cardamom Seeds bruised, }
Quassia, } each one drachm.

Peruvian Bark, half an ounce.

Pour on these a quart-bottle of red port-wine, and filter off the liquor after four days.

Dose, a small wine-glassful, twice a day.

CARMINATIVES.

ESSENCE OF PEPPERMINT.—Dose, from ten to twenty drops on a small piece of sugar.

DALBY'S CARMINATIVE.—Dose, from two tea-spoonsful to a table-spoonful, mixed with a little sugar and water.

COMPOUND ASSAFÆTIDA PILLS.—Dose, three at bed-time.

CORDIALS.

SPIRITS OF NITROUS ÆTHER, called Dulcified Spirit of Nitre.—Dose, a large tea-spoonful, mixed with warm water, agreeably sweetened.

SAL VOLATILE DROPS.—Dose, a tea-spoonful every hour or two, in a glass of spring-water.

BARLEY CINNAMON WATER.—Dose, one or more table-spoonsful.

CORDIAL DRAUGHT.—Take of

Volatile Tincture of Valerian one drachm,
Simple Syrup, }
Water, } of each half an ounce.

Mix them together.

To be taken at once.

CORDIAL DROPS.—Take of

Tincture of Hops, }
Volatile Tincture of Valerian, } of each equal
parts.

Mix them together.

Dose, two tea-spoonsful in a glass of water.

CORDIAL MIXTURE.—Take of

Compound Spirit of Lavander, } each half an
Tincture of Saffron, } ounce,
Syrup, one ounce,
Spring-water, six ounces.

Mix them together.

Dose, two table-spoonsful every hour or two.

DIAPHORETICS.

ANTIMONIAL WINE.—Dose, twenty drops every hour or two, in gruel, till the proper effect be produced.

DOVER'S POWDER.—Dose, ten grains in gruel or honey, every six or eight hours, while necessary.

JAMES'S POWDER.—Dose, three or four grains, in marmalade or conserve of roses, to be repeated every two or three hours, according to circumstances.

DIAPHORETIC DRAUGHT.—Take of

Laudanum, thirty-five drops,
Antimonial Wine, twenty drops,
Simple Cinnamon-water, } of each three drachms.
Syrup,

Mix them.

To be taken at bed-time.

SALINE JULEP.—Take of

Lemon Juice, one ounce,

Salt of Tartar, (Carbonate of Potass), four scruples.

After the effervescence, add,

Syrup, two drachms,

Simple Cinnamon Water, half an ounce,

Spring Water, six ounces.

Mix them.

Dose, two table-spoonsful every three hours.

DIURETICS.

CREAM OF TARTAR.—Dose, from two drachms to half an ounce, dissolved in a pint and a half of water, to be taken throughout the course of the day. It must be gradually increased as the stomach becomes accustomed to it.

OIL OF JUNIPER.—Dose, ten drops in gruel, twice or thrice a-day.

NITRE.—Dose, from fifteen to twenty grains, mixed with sugar, and put into gruel, twice or thrice a-day.

DULCIFIED SPIRIT OF NITRE.—Dose, a tea spoonful every hour or two, while required.

DRIED SQUILL.—Dose, from half a grain to a grain, three or four times a-day, in the form of pills.

DRINKS.

ALMOND EMULSION.—Take of

Sweet Almonds, blanched, two ounces,

Refined Sugar, two ounces.

Beat them well in a marble mortar, and then add, by degrees,

Simple Cinnamon Water, three ounces,

Spring Water, an English pint and an half.

Dose, a tea cupful every two hours.

IMPERIAL DRINK.—Take of

Cream of Tartar, Refined Sugar, each two drachms,

Outer Rind of fresh Lemon, one drachm,

Boiling Water, one quart.

After it is cool, strain off the liquor.

To be used as ordinary beverage.

Barley Water, Jelly Water, Lemonade, Rice-gruel, Water-gruel, White-wine Whey, the uses of which are well known.

EMETICS.

ANTIMONIAL WINE.—Dose, two tea-spoonsful.

IPECACUAN (in Powder).—Dose, fifteen or twenty grains, mixed with sugar and warm water.

EMETIC TARTAR.—Dose, from half a grain to one grain, dissolved in warm water.

EYE WATERS,

May be formed, by dissolving a grain of the acetate of lead or of zinc, or of the sulphate of zinc, or of pure opium, in an ounce of rose-water. A weak infusion of chamomile-flowers, or of green-tea, sometimes forms a very useful eye-water.

EMBROCATIONS.

MILD EMBROCATION.—Two or three ounces of the opiate electuary, of the Edinburgh Pharmacopœia, spread upon leather.—Two ounces of the cardiac electuary of the London Pharmacopœia, spread on linen or leather.

STRONG EMBROCATION.—This is made, by adding to the former a drachm or two of powdered cantharides, or some oil of amber, or some rectified oil of turpentine.

LAXATIVES.

CALOMEL.—Dose, from five to eight grains, mixed with sugar, or any thing but drinks.

CASTOR-OIL.—Dose, from half an ounce to an ounce, every six hours, till it operate. The *cold-drawn* Castor-Oil is the only safe preparation of this medicine.

JALAP.—Dose, from twenty to thirty grains.

LAXATIVE POWDERS—May be formed of jalap and calomel, of gamboge and James's powder, of rhubarb and jalap, of aloes and colocynth, of powdered senna, crystals of tartar and jalap, &c.

LAXATIVE SALTS.—Brasil salts, Cheltenham salts, Phosphate of Soda, Polychrest salts, and Epsom and Sedleitz salts, are the chief saline laxatives.

LAXATIVE ELECTUARY.—Take of

Powder of Jalap, one drachm,	
Crystals of Tartar,	} each two drachms.
Refined Sugar,	

Rub them well together, in a marble or glass mortar, then add,

Lenitive Electuary, one ounce and an half,
Syrup of Roses, as much as will make the whole into a soft consistence.

Dose, a drachm every two hours, till it operate.

STRONG LAXATIVE ELECTUARY.—Take of

Powder of Ginger, twenty grains,
Powder of Jalap, in fine powder, one drachm,
Cream of Tartar, one ounce,
Syrup, as much as will give the whole a proper consistence.

Dose, two drachms in the morning.

LAXATIVE PILLS.—Take of

Powder of Ginger, ten grains,	
Socotorine Aloes, in finest powder,	} each one drachm.
Castile Soap,	

Beat them together in a stone mortar, and then add two or three drops of syrup, so as to form a mass, which is to be made into thirty-two pills.

Dose, two at bed time.

Or, take of Extract of Hyoscyamus, fifteen grains, compound Extract of Colocynth, half a drachm, form into twelve pills.

Dose, the same as the former.

STRONG LAXATIVE PILLS.—Take of

Powder of Ginger, ten grains,

Gamboge, twenty grains,
Castile Soap, forty grains,
Compound Extract of Colocynth, one drachm and an
half.

Form these, as directed in the preceding receipt, into
thirty-six pills.

Dose, two or three at bed time, according to the state
of the belly.

LAXATIVE POWDER.—Take of

Calomel, five grains,

Powder of Jalap, twenty-five grains.

Rub them well together in a glass mortar.

To be taken in the morning in marmalade.

LAXATIVE DRAUGHT.—To the above powder, add of

Aromatic Powder, five grains,

Syrup and Peppermint Water, each half an ounce.

Mix them.

To be taken in the morning, shaking the phial carefully.

LAXATIVE DRAUGHT,—where the milk is to be discour-
aged.—Take of

Fine Turkey Rhubarb, twenty-five grains,

Compound Powder of Jalap, one drachm,

Syrup and Cinnamon Water, each half an ounce.

Mix them.

To be taken in the morning, shaking the phial.

INFUSION OF SENNA.—Take of

Senna Leaves, separating the stalks, three drachms,

Tamarinds, half an ounce,

Boiling Water, ten ounces.

After eight hours, strain off the liquor, and add one ounce
of the compound tincture of Senna.

Dose, a small tea-cupful every two hours, till it operate.

LAVEMENS*.

EMOLLIENT LAVEMENT.—Take of

Common Salt, }
Coarse Sugar, } of each a table-spoonful,
Fine Olive Oil, four ounces,
Warm Gruel, fourteen ounces.

Mix them.

ANODYNE LAVEMENT.—Take of

Laudanum, one drachm,
Thin Starch moderately warm, four ounces.

Mix them.

RESTRINGENT LAVEMENT.—Add to the preceding receipt, of Catechu (Japonic Earth) two drachms,
Peruvian Bark; three drachms.

Mix them.

STRONG LAXATIVE LAVEMENT †.—Take of

Senna leaves, one ounce,
Spring-water, two English pints.

Boil them till one pint only remains, and to the strained liquor add,

Common Salt, one ounce,
Fine Olive or Common Castor-oil, four ounces.

Mix them.

Another strong purgative Lavement, may be made by adding to an English pint of gruel two ounces of oil of turpentine, and as much common castor-oil.

* LAVEMENT, in the whole of this Work, has been used for the English word GLYSTER.

† Nourishing Lavements may be formed by adding to four ounces of beef-tea or thin gruel, twenty or thirty drops of laudanum. This addition is made to prevent the glyster from being rejected.

LINIMENT.

FOR SORE NIPPLES, AND FOR SCALDS AND BURNS.—
Take of

Litharge, }
Vinegar, } each two drachms,
Olive-oil, six drachms.

To be made into a liniment, by adding the vinegar and oil alternatively in small quantities to the powdered litharge, and rubbing the whole together till the liniment be of a pale flesh colour, and of the consistence of cream.

REFRIGERANTS.

ACIDULATED DRINKS.

RIPE ACESCENT FRUITS.

NITROUS MIXTURE.—Take of

Nitre, two drachms,
Refined Sugar, three drachms,
Distilled Vinegar, one ounce and a half,
Spring-water, six ounces.

Mix them.

Dose, one or two table-spoonsful every two hours when necessary.

STRENGTHENING MEDICINES.

BITTERS, ELIXIR OF VITRIOL, PERUVIAN BARK, &c.

TINCTURE OF BARK.—Dose, two tea-spoonsful, in a glass of wine, barley-cinnamon, or peppermint water, twice a-day.

SULPHATE OF IRON.—Dose, from two to four grains twice a-day mixed in treacle.

No. IV.

Medicines for Infants and Children.

ABSORBENTS.

CALCINED MAGNESIA AND PREPARED CHALK.—Dose, from two to ten grains, mixed with any liquid.

LIME-WATER.—Dose, from one to three table-spoonsful.

ANODYNES.

LAUDANUM.—This medicine is to be employed with the greatest caution; and should scarcely ever be given unless prescribed by a regular practitioner. Instances have occurred where it has proved fatal to infants; and in all cases it is apt to disorder the stomach and bowels of children. Dose, from three to ten drops.

TINCTURE OF HYOSCYAMUS,—Dose from ten to thirty drops.

ANODYNE EMBROCATION.—The tincture of soap with opium, commonly called anodyne balsam.—From a tea-spoonful to a table-spoonful of this may be rubbed on the surface of the belly, or along the course of the spine, evening and morning; and in many cases it allays pain as effectually as laudanum administered internally, while it is always a safer means of relief.

ASTRINGENTS.

For Internal Use.

ASTRINGENT MIXTURE.—Take of
Best Turkey Rhubarb, twenty grains,

Prepared Chalk, one drachm,
Powder of Opium and Ipecacuan, (formerly called
Dover's Powder), ten grains,
Simple Cinnamon-water, half an ounce,
Spring-water, two ounces and an half.

Mix carefully.

Dose, from one to four tea-spoonsful every six hours.
This is found particularly useful in some cases of habitual
looseness.

STRONGER ASTRINGENT MIXTURE.—Take of

Electuary of Catechu, two drachms,
Prepared Chalk, half an ounce,
Simple Cinnamon-water, one ounce,
Spring-water, five ounces.—Mix.

Dose, from two tea-spoonsful to a table-spoonful every
three or four hours. This may be rendered still more
powerful in checking debilitating looseness by the addition
of a small proportion of laudanum to each dose.

For External Use.

SOLUTION OF SUGAR OF LEAD.—Dissolve one drachm of
Sugar of Lead in an English pint of spring-water. This
may be made still more powerful by the addition of two
ounces of distilled Vinegar. It is chiefly useful in swellings
and inflammations from sprains, blows, &c.

WEAK ASTRINGENT LOTION.—Dissolve half a drachm of
White Vitriol (Sulphate of Zinc) in an English pint of
rose-water.—This is to be employed evening and morning
whenever any part of the skin of infants appears tender.

CARMINATIVES.

ANISE SUGAR.—Dose, two grains.

SIMPLE (commonly called Barley) CINNAMON WATER —
Dose, from one to two tea-spoonsful.

ESSENCE OF PEPPERMENT.—Dose, from one to three drops.

DALBY'S CARMINATIVE.—Dose, from five to thirty drops.

CORDIALS.

BARLEY CINNAMON WATER.—Dose, as above.

WHITE WINE WHEY.—Dose, within the twenty-four hours, from one to two table-spoonsful of sherry wine made into whey, for infants.

CORDIAL MIXTURE.—Take of

Ammoniated Aromatic Tincture, half a drachm.

Simple Syrup, half an ounce,

Spring-water, three ounces.—Mix.

Dose, from one to three tea-spoonsful every two or three hours.

DIAPHORETICS.

ANTIMONIAL WINE.—Dose, from three to ten drops every two hours.

SALINE JULEP.—See page 399.

Dose, three or four tea-spoonsful every two or three hours, for children.

DIAPHORETIC MIXTURE.—Take of

Emetic Tarter two grains.

Boiling-water, eight ounces.

Dissolve the powder, by rubbing it carefully with the water in a glass mortar.

Dose, from one to three tea-spoonsful every three hours.

As this medicine is quite tasteless, it may be given mixed with any other liquid except tea. If it excites sickness, it is to be diluted, by adding half as much, or an equal quantity of water, according to circumstances.

DIURETICS.

NITROUS MIXTURE.—Take of

Nitrate of Potass, (vulgarly called Saltpetre), one drachm,

Refined sugar, half an ounce.

Rub them together, and add eight ounces of Spring Water, so as to dissolve both the nitre and the sugar.

Dose, from two to four tea-spoonsful, for children.

DIURETIC MIXTURE.—Take of

Dulcified Spirit of Nitre, one drachm,

Syrup, half an ounce,

Spring Water, three ounces.

Mix them.

Dose, from one to two table-spoonsful every two or three hours.

DIURETIC DRINKS are made by dissolving cream of tartar, or the acetate of potass, in boiling-water, and adding as much sugar as shall render the drink agreeable. One drachm of cream of tartar and two drachms of the acetate of potass, are the proportions to a quart of water.

EMBROCATIONS.

MILD EMBROCATION.—See page 401.

MORE POWERFUL EMBROCATION.—Add to two ounces of the Opiate Electuary, half a drachm of Powdered Cantharides, and two drachms of Amber Oil.

EXTEMPORANEOUS EMBROCATIONS—May be formed by means of Flour of Mustard, spread over a bread and milk poultice, with the addition of Vinegar, or of Oil of Turpentine.

EMETICS.

IPECACUAN POWDER.—Dose, from three to fifteen grains.

IPECACUAN WINE.—Dose, from two tea-spoonsful to a table-spoonful every quarter of an hour, till vomiting take place.

N. B.—In some rare cases, as in Croup, Hooping-Cough, &c. it is necessary to add to the ipecacuan powder a very small portion of the tartrate of antimony or of the sulphate of zinc; but this must never be hazarded without the advice of a regular practitioner.

EYE-WATERS

May be formed by dissolving a grain of the acetate of lead, or of zinc, or of the sulphate of zinc, or of pure opium, in an ounce of rose-water. A weak infusion of chamomile flowers, or of green tea, sometimes forms a very useful eye-water.

LAVEMENS.

EMOLIENT LAVEMENT.—Take of
Common Salt, a tea-spoonful,
Fine Olive Oil, a table-spoonful,
Warm Gruel, from six to twelve ounces.
Mix them.

LAXATIVE LAVEMENT.—Take of
Phosphorated Soda, two drachms,
Boiling Water, eight ounces,
Add, when nearly cool,
Castor Oil, a table-spoonful.
Mix them.

ANODYNE LAVEMENT.—Take of
Laudanum from five to twenty drops, (according to the age),
Thin starch, two spoonsful.
Mix them.

CAMPHOR LAVEMENT.—Take of

Camphor from ten grains to one scruple, of Alcohol ten drops, of refined Sugar half an ounce, and of common Magnesia half a drachm ; reduce them to a very fine powder, and then add gradually two table-spoonsful of Boiling Water, and as much Mucilage of Gum Arabic.

LAXATIVES.

ALOES (SOCOTORINE).—Dose, from three to eight grains.

COLD-DRAWN CASTOR OIL.—Dose, from one tea-spoonful to a table-spoonful.

GAMBOGE.—Dose, from one to two grains every six hours.

JALAP.—Dose, from three to fifteen grains.

MAGNESIA (CALCINED).—Dose, from three to fifteen grains.

MANNA.—Dose, for infants, from half a drachm to two drachms.

SCAMMONY.—Dose, from one to six grains.

SENNA—May be given in the form of infusion or of syrup.

RHUBARB.—Dose, from two to fifteen grains.

N. B.—It is often necessary to combine two or more of the above medicines in one dose.

LINIMENTS.

FOR SCALDS AND BURNS.—The liniment mentioned in page 405.

LINIMENT FOR THE RING-WORM *.—Take of the dried Sulphate of Alumine, and of the Muriate of Mercury, each six drachms, of the Semivitreous Oxyde of Lead one ounce, of the White Oxyde of Lead, of Venice Turpentine, each four ounces, and of Axunge one pound. Make them

* The Unguentum ad Scabiem of Henry Banyer.

into an ointment. This is best done by reducing the dry materials to a fine powder, and adding them gradually to the melted Axunge and Venice Turpentine.

LOTIONS.

MILD LOTION.—Dissolve half an ounce of the Carbonate of Potass in an English pint of spring water.

ANOTHER MILD LOTION.—Mix one part of the solution of the Acetate of Ammonia with six parts of distilled water.

MORE POWERFUL LOTIONS—May be formed by any of the ordinary metallic solutions, or by lime-water.

POWDERS.

FOR SCALDS AND BURNS.—Take half a drachm of Camphor, and reduce it to powder by means of Alcohol, then add one ounce of Prepared Chalk; let them be carefully rubbed together in a glass or Wedgwood's ware mortar, till they form an impalpable powder.

FOR ULCERATIONS—May be made of Prepared Chalk, or of Calamine, or of Tutty Powder, or of Peruvian Bark with Camphor, or of the Oxyde of Zinc, according to circumstances.

STRENGTHENING MEDICINES.

The ordinary preparations of Bark and Myrrh.

SUGAR OF STEEL.—Sold in Edinburgh by the Confectioners under the title of Steel Carvy.—Dose for Children, a tea-spoonful once a-day.

WINE OF STEEL.—Dose, from five to twenty drops twice a-day.

THE END.



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